Final Environmental Assessment for the Radar Cross-Section Advanced Measurement Site Comprehensive Project at White Sands Missile Range, NM

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FINAL FINDING OF NO SIGNIFICANT IMPACT

For
Radar Cross-Section Accurate Measurement Site Comprehensive Environmental Assessment
Holloman Air Force Base, New Mexico

1.0 NAME OF ACTION AND DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This document is an Environmental Assessment (EA) for the Radar Cross-Section Advanced Measurement Site (RAMS) Comprehensive Environmental Expansion at Holloman Air Force Base (HAFB), New Mexico.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

The 46th Test Group (TG) National Radar Cross-Section Test Facility (NRTF) Division proposes a comprehensive expansion to the RAMS site, on White Sands Missile Range (WSMR) United States Army. The purpose of these proposed actions is to expand, upgrade, and modernize the RAMS site to accommodate its current workload. These requirements are driven by national testing at the NRTF.

2.1 Proposed Action

The Air Force NRTF proposes to comprehensively expand the RAMS site on WSMR. These actions will include the addition of an Indoor Target Flip Facility and the Advanced Target Suspension System (ATSS). The ATSS is composed of two phases: Phase One: Permanent Fixture and Phase Two: Spur Range. Reasonably foreseeable projects to be evaluated as part of the environmental analysis include: a new Paint Facility, Maintenance and Supply Facilities, Equipment Shelter building, three Administrative Facilities, six Target Storage Facilities, and Utility and Road Upgrades. Building 5018 will be removed and recycled prior to the construction of the Indoor Target Flip Facility which will be sited on the current Building 5018 location. The Environmental Analysis included a Cultural Resources Survey and a Threatened and Endangered Species Survey of undisturbed areas to be impacted by the proposed action. The EA analyzes potential impacts on water resources, air quality, erosion, socioeconomics, hazardous materials, hazardous waste, cultural resources, biological resources, and other attributes affected by the proposed action or alternatives.

2.2 Alternative One

This alternative action projects the on-site construction of the following facilities to advance the modernization and upgrade of the RAMS site: the addition of an Indoor Target Flip Facility and the Advanced Target Suspension System (ATSS).

2.3 Alternative Two

This alternative expands the construction for the RAMS site modernization identified in alternative one and in addition includes a new Paint Facility, a Maintenance Facility, a Supply Facility, and Equipment Shelter Building.

2.4 No Action Alternative

As part of the environmental analysis, the National Environmental Policy Act (NEPA) requires the proponent to evaluate other alternatives to include the No Action alternative. For this action due to the remote location of the RAMS site, no other alternative site locations were considered viable, thus were not evaluated with the exception of the No-Action Alternative. The No-Action Alternative would involve no construction of new facilities or enhancement to current capabilities. Future DOD, high priority programs

would have to be turned away due to insufficient space to house and protect their targets. This would result in the loss of future testing requirements and NRTF customers.

2.5 Eliminated Alternatives

The RAMS comprehensive expansion planning assessed other possible alternatives which would meet current site operational requirements.

Important RAMS site background: In the early 1980's the current RAMS site was selected after several areas in the western United States were considered including several off-WSMR sites. In the site selection process over 65 sites were identified that contained the required flat plane. However, only ten sites had some or all of the drop-off required for least cost construction. The current RAMS site (Rhodes Canyon) met all of the selection criteria: 1) cost of construction, 2) cost of new power lines and roads, 3) interaction between WSMR and RAMS operations, 4) environmental factors, and 5) decontamination of unexploded ordnance.

The criteria used to screen and consider potential project site locations for the RAMS proposed projects included:

- Facility locations to be in close proximity to the current RAMS operational facilities area and the need to have new facilities relatively near to the current support facility cluster (to be within one mile);
- Be able to use the current transportation (road system) and utility infrastructure;
- Topography-site locations that would require minimum fill or excavation and locations that would not alter the arroyo drainage patterns and negatively affect storm water runoff;
- Location of facilities that would not require a major upgrade of the current security physical system and enable the current security operations to include the new project area without major manpower increases;
- Evaluate areas that had previously been surveyed for threatened and endangered species and cultural impacts;
- The need to have new facilities separate to support operational requirements of testing at RAMS; and
- Would not have a negative impact on the mission of the NRTF.

Alternatives Considered but not Carried Forward

Alternative 1. Consolidate New Facilities into One Complex:

Separate facilities are required based on operational requirements. Consolidating these facilities into one complex would not accommodate site administration requirements.

Alternative 2. Expand Building 5018:

Building 5018 is a temporary structure. The structure design does not support expansion to accommodate the proposed Indoor Target Flip Facility.

3.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION, ALTERNATIVE ONE, ALTERNATIVE TWO, AND NO-ACTION ALTERNATIVE

As required by the National Environmental Policy Act (NEPA), this EA evaluates the potential environmental impacts associated with the proposed RAMS Comprehensive Expansion. The findings for each resource area are described below for the Proposed Action, Alternative One, Alternative Two, and the No-Action Alternative.

3.1 Geological Resources and Climate

Leveling and clearing of the construction areas would disturb surface soil and result in loss of vegetation cover. This relatively small amount of disturbance would constitute an insignificant impact. Some construction activity would occur on existing disturbed surfaces. Erosion Control Plans (ECP) and Erosion Control Measures (ECM) would be used during construction and in site design to achieve minimal disturbance and loss of soil.

3.2 Land Use

The land use remains the same as currently categorized for the RAMS site. There is no significant impact on the land use of the proposed action.

3.3 Biological Resources

The project area to be disturbed consists predominately of native creosotebush scrubland habitat A Threatened and Endangered Species Survey was conducted in the project area, and there were no threatened or endangered species found during the survey. In addition there was found to be no effect for the Northern Aplomado falcon after evaluation of potential foraging habitat and the absence of area sightings. As a result a finding of no effect on threatened and endangered species by the proposed action was made. A large part of the construction activity would occur on already disturbed surfaces. Disturbance of land around the construction sites would be short-term due to revegetation efforts using native plant species. The natural vegetation community is not unique to the project area; most of the thousands of acres adjacent to the RAMS site are similar in elevation, soil composition, and vegetation type.

3.4 Water Resources

There is no significant impact on water resources. Demand on water will be limited for construction dust control, human consumption, and other construction related uses. Construction concrete would be prepared off site and brought to RAMS. RAMS does have non-potable water on site which is pumped from a local 220 foot well. In the proposed action a new 100,000 gallon fire suppressant holding tank will be constructed and filled with RAMS site non-potable water. No significant additional personnel would be added and no significant additional water usage is anticipated. The proposed action, alternative one, or alternative two would impose no additional load on existing water supplies after servicing of the new fire suppressant tank.

3.5 Floodplains & Wetlands

The area of affect is on the lower slope of the San Andres Mountains, with multiple dry wash beds (arroyos) draining all runoff. There are no ponding areas, and no evidence of plants characteristic of wetland settings. The United States Environmental Protection Agency (USEPA) National Pollutant Discharge Elimination System (NPDES) requires Construction General Permit coverage for storm water discharges from construction projects that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. This permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMP) be installed and

maintained both during and after construction to prevent, to the extent practicable pollutants (primarily sediment, oil & grease, and construction materials from construction sites) in storm water runoff from entering waters of the U.S. Buildings, parking areas, roadways, and water suppression tank sites will be designed to control storm water runoff and prevent erosion in accordance with USEPA NPDES guidance.

3.6 Cultural Resources

The proposed new construction will take place in the RAMS project area and will not have any significant impact on cultural resources per a recent cultural resources survey. If unrecorded archaeological resources are inadvertently discovered during construction, work would be halted at that location and the HAFB and White Sands Cultural Resources Manager would be notified in accordance with the WSMR Integrated Cultural Resources Management Plan.

3.7 Air Quality

The proposed action, alternative one, and alternative two would produce negligible impacts to air quality during construction. The RAMS access road is paved and would limit entry/exit construction related air emissions. Erosion Control Plans (ECP) and Erosion Control Measures (ECM) would be used to control soil erosion and airborne dust generation. The paint booth in the proposed action and alternative two is intended to be equipped with state of the art air emission controls. Paint related emissions are anticipated to be similar to the present facility and will replace some work load presently performed in the current paint booth. An air permit would be required for the new paint facility prior to construction and would be administratively considered with the WSMR air quality manager. New paint facility emission controls and related projected workload would limit impact on air quality to no more than currently experienced with the present painting operations.

3.8 Noise

No significant noise impact is reasonably expected to result from the construction and operation of the proposed facilities.

3.9 Airspace Management

There is no impact on airspace management. The RAMS site does not operate any flight operations and over flight by aircraft using the range is uncommon. The proposed facilities will not affect airspace management.

3.10 Safety

All personnel shall follow OSHA regulations to ensure safety on the work site. Possible health and safety concerns for workers in the RAMS area include: 1) Contact with unexploded ordnance (UXO), 2) Venomous snakes and insects, and 3) Thorn bushes. All personnel would have received UXO training before being allowed entry into the work area. There would be no impacts related to human health and safety from the proposed area construction and anticipated future site use thereafter.

3.11 Outdoor Recreation

There is no significant outdoor reaction impact. The proposed area of construction is within the current RAMS Site controlled access area that restricts entry for security and safety requirements. Recreational use is not permitted.

3.12 Infrastructure

There would be negligible impacts on regional infrastructure. A small increase in traffic is expected to occur during building construction and utility trenching. This impact would be temporary and would not exceed the capacity of the existing roadway. Water for construction would be provided by both on-site wells and be brought on-site for construction, so there will be a temporary insignificant increase in water demand. No significant increase in personnel is anticipated, therefore, long-term electricity and water usage would not increase. Utility upgrades would occur adjacent to current underground utility services for electrical, communications, and water. New utility services for the proposed facilities and future operations at RAMS will be routed in or immediately adjacent to existing utility corridors and roads, will result in only minor disturbance to soils and no adverse effects on the conditions or capacities of the existing infrastructure.

3.13 Hazardous Materials and Waste Management

Hazardous waste generated at the RAMS site is managed by the 46th Test Group, a tenant on HAFB, under the HAFB Resource Conservation Recovery Act (RCRA) Container Storage Permit. By letter dated 4 Dec 87, the NM Hazardous Waste Bureau agreed that the 46th TG activities are an Air Force operation that should be managed under the HAFB RCRA Permit. Access to and operation of the site is under Air Force authority through agreement between WSMR, HAFB, and the 46th Test Group. Hazardous wastes are delivered, along controlled access military roads, to the HAFB <90-day storage area without crossing public highways and disposal is managed through the defense Reutilization Marketing Office (DRMO) on HAFB.

3.14 Socioeconomics

There is no significant impact on population, employment, or income in the surrounding local communities.

3.15 Environmental Justice

There is no significant impact on minority or low income populations for the proposed action.

4.0 CONCLUSION

Based on the findings of the environmental assessment, no significant impact on human health or the natural environment would be anticipated as a result of the implementation of either the proposed action, alternative one, or alternative two. The proposed action encompasses all known RAMS site construction. Alternative one or two impacts the RAMS site to a lesser degree than the proposed action. A Finding of No Significant Impact is warranted and an Environmental Impact Statement is not required for this action.

Kurt A. Cichowski

6 May 2005

Kurt A. Cichowski
Brigadier General, USAF
Commander, 49th Fighter Wing

Date

Attached: RAMS EA Concurrence from WSMR

U.S. ARMY WHITE SANDS MISSILE RANGE
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000

Title: Environmental Assessment for the Radar Cross-Section Active Measurement System (RAMS) Comprehensive Project at White Sands Missile Range, NM

CONCUR:

Thomas A. Ladd — 23 Jun 05

THOMAS A. LADD
Director, Environment and Safety Directorate
White Sands Missile Range

DATE

D E Gentry — 27 Jun 05

DONALD E. GENTRY
COL, FA
Garrison Commander
White Sands Missile Range

DATE

EXECUTIVE SUMMARY

This document is an Environmental Assessment (EA) for the Radar Cross Section (RCS) Advanced Measurement Site (RAMS) Comprehensive Expansion Plan. Located at Holloman Air Force Base (HAFB), the 46th Test Group (46 TG) National Radar Cross-Section Test Facility (NRTF) Division proposes to upgrade and modernize RAMS on White Sands Missile Range (WSMR) New Mexico. The purpose of this proposed action is to expand, upgrade, and modernize the RAMS site to accommodate its current workload. These requirements are driven by national testing at NRTF.

The proposed action will include the addition of an Indoor Target Flip Facility and the Advanced Target Suspension System (ATSS). The ATSS is composed of two phases: Phase One: Permanent Fixture and Phase Two: Spur Range. Reasonably foreseeable projects to be evaluated as part of the environmental analysis include: a new paint facility, maintenance and supply Facilities, equipment shelter building, three administrative facilities, six target storage facilities, and utility and road upgrades. Building 5018 will be removed and recycled prior to the construction of the Indoor target flip facility which is to be constructed on the former site of Building 5018. These reasonably foreseeable actions would take place in a project area that is approximately 600 acres, of which 450 acres within this area have not previously been disturbed. The EA analyzes potential impacts on water, air quality, erosion, socioeconomics, hazardous materials, hazardous waste, cultural resources, biological resources, and other attributes affected by the proposed action.

Alternative Actions including the No Action Alternative are required by the National Environmental Policy Act (NEPA) to be part of the environmental analysis. Alternative one projects the on-site construction of an Indoor Target Flip Facility and the Advanced Target Suspension System (ATSS) for the modernization and upgrade of the RAMS site. Alternative two expands the construction for the RAMS site modernization in alternative one and adds a new Paint Facility, a Maintenance Facility, a Supply Facility, and Equipment Shelter Building.

After carefully evaluating the criteria for screening and selecting potential project sites, no other viable alternative was found to exist. Selecting the No Action Alternative would cause future Department of Defense (DoD), high priority programs to be turned away due to insufficient space to house and protect their targets. This would result in the unavoidable limit on future testing capabilities and be detrimental to national defense.

As required by the National Environmental Policy Act (NEPA), this EA evaluates the potential environmental impacts associated with the proposed RAMS comprehensive expansion project and the no action alternative. The findings for each resource area are described below.

Geological Resources and Climate:

Leveling and clearing of the construction areas would disturb surface soil and result in loss of vegetation cover. Some construction activity would occur on existing paved surfaces. Standard Best Management Practices (BMP) utilizing Erosion Control Plans (ECP) and Erosion Control Measures (ECM) would be used during construction and in site design to achieve minimal disturbance and loss of soil.

Land Use

The land use remains the same as currently categorized for the RAMS site. There is no significant impact on the land use of the proposed action for the RAMS site new construction.

Biological Resources

The project area to be disturbed consists predominately of native creosotebush scrubland habitat A Threatened and Endangered Species Survey was conducted in the project area, and there were no threatened or endangered species found during the survey. In addition, it was determined that there will be no effect on the Northern Aplomado falcon after careful evaluation of potential foraging habitat and the absence of area sightings. As a result a finding of no effect on threatened and endangered species by the proposed action was made. A large part of the construction activity would occur on already disturbed surfaces. Disturbance of land around the construction sites would be short-term due to revegetation efforts using native plant species. The natural vegetation community is not unique to the project area; most of the thousands of adjacent acres are similar in elevation, soil composition, and vegetation.

Water Resources

There is no significant impact on water resources. Demand on water will be limited for construction dust control, human consumption, and other construction related uses. Construction concrete would be prepared off site and brought to RAMS. RAMS does have non-potable water on site which is pumped from a local 220 foot well. In the proposed action a new 100,000 gallon fire suppressant holding tank will be constructed and filled with RAMS site non-potable water. No significant additional personnel would be added and no significant additional water usage is anticipated. The proposed action, alternative one, or alternative two would impose no additional load on existing water supplies after servicing of the new fire suppressant tank.

Floodplains and Wetlands

The area of affect is on the lower slope of the San Andres Mountains, with multiple dry wash beds (arroyos) draining all runoff. There are no ponding areas, and no evidence of plants characteristic of wetland settings. The United States Environmental Protection Agency (USEPA) National Pollutant Discharge Elimination System (NPDES) requires Construction General Permit coverage for storm water discharges from construction projects that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. This permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMP) be installed and maintained both during and after construction to prevent, to the extent practicable pollutants (primarily sediment, oil & grease, and construction materials from construction sites) in storm water runoff from entering waters of the U.S. Buildings, parking areas, roadways, and water suppression tank sites will be designed to control storm water runoff and prevent erosion in accordance with USEPA NPDES guidance.

Cultural Resources

The proposed new construction will take place in the RAMS project area and will not have any significant impact on cultural resources per a recent cultural resources survey. If unrecorded archaeological resources are inadvertently discovered during construction, work would be halted at that location and the HAFB and White Sands Cultural Resources Manager would be notified in accordance with the WSMR Integrated Cultural Resources Management Plan.

Air Quality

The proposed action, alternative one, and alternative two would produce negligible impacts to air quality during construction. The RAMS access road is paved and would limit entry/exit construction related air emissions. Erosion Control Plans (ECPs) and Erosion Control Measures (ECMs) would be used to control soil erosion and airborne dust generation. The paint booth in the proposed action and alternative two is intended to be equipped with state of the art air emission controls. Paint related emissions are anticipated to be similar to the present facility and will replace some work load presently performed in the current paint booth. An air permit would be required for the new paint facility prior to construction and would be administratively considered with the WSMR air quality manager. New paint facility emission controls and related projected workload would limit impact on air quality to no more than currently experienced with the present painting operations.

Noise

No significant noise impact is reasonably expected to result from the construction and operation of the proposed facilities.

Airspace Management

There is no impact on airspace management. The RAMS site does not operate any flight operations and over flight by aircraft using the range is uncommon. The proposed facilities will not affect airspace management.

Safety

All personnel shall follow Occupational Safety and Health Administration (OSHA) regulations to ensure safety on the work site. Possible health and safety concerns for workers in the RAMS area include: 1) Contact with unexploded ordnance (UXO), 2) Venomous snakes and insects, and 3) Thorn bushes. All personnel will receive UXO training

before being allowed entry into the work area. There would be no impacts related to human health and safety from the RAMS area construction and anticipated site use thereafter.

Outdoor Recreation

There is no significant outdoor recreation impact. Since the RAMS Site is a controlled entry location for security and safety requirements, recreational use is not permitted.

Infrastructure

There would be negligible impacts on regional infrastructure. A small increase in traffic is expected to occur during building construction and utility trenching. This impact would be temporary and would not exceed the capacity of the existing roadway. Water for construction would be provided by both on-site wells and be brought on-site for construction, so there will be a temporary small increase in water demand during the construction period. No significant increase in personnel is anticipated, therefore, long-term electricity and water usage would only slightly increase. Utility upgrades would occur adjacent to current underground utility services for electrical, communications, and water. New utility services will result in a minor impact for the new facilities. Utilities will be located in previously disturbed areas and will disturb only minor soil conditions when routed to the new facilities; all current main utility lines are located along the roadway and new facilities will be near current utility services. It is recommended where possible that trenching and burying cable and pipeline be done concurrently. In addition, it is recommended that the least amount of trench possible be left open overnight and to provide escape ramps for trapped wildlife.

Hazardous Materials and Waste Management

Hazardous waste generated at the RAMS site is managed by the 46th Test Group, a tenant on HAFB, under the HAFB Resource Conservation Recovery Act (RCRA) Container Storage Permit. By letter dated 4 Dec 87, the NM Hazardous Waste Bureau agreed that the 46th TG activities are an Air Force operation that should be managed under the HAFB RCRA Permit. Access to and operation of the site is under Air Force authority through agreement between WSMR, HAFB, and the 46th Test Group. Hazardous wastes are delivered, along controlled access military roads, to the HAFB <90-day storage area without crossing public highways and disposal is managed through the defense Reutilization Marketing Office (DRMO) on HAFB.

Socioeconomics

There is no significant impact on population, employment, or income in the surrounding local communities.

Environmental Justice

There is no significant impact on minority or low income populations for the proposed action.

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ABBREVIATIONS, ACRONYMS & TERM DEFINITIONS

Acronym	Definition
AAQS	Ambient Air Quality Standards
ACC	Air Combat Command
ACM	Asbestos Containing Material
AF	Air Force
AFB	Air Force Base
AFPO	Air Force Project Office
AFI	Air Force Instruction
ATSS	Advanced Target Suspension System
BMP	Best Management Practices
C	Candidates
°C	degrees Celsius
CAA	Clean Air Act
CES	Civil Engineering Squadron
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRR	Cultural Resource Report
CWA	Clean Water Act
DoD	Department of Defense
DOPAA	Description of Proposed Actions and Alternatives
DRMO	Defense Re-Utilization and Marketing Office
EA	Environmental Assessment
ECM	Erosion Control Measure
ECP	Erosion Control Plan
EIAP	Environmental Impact Analysis Process
E.O.	Executive Order
EOD	Explosive Ordnance Disposal
ESA	Endangered Species Act
°F	degrees Fahrenheit
ft	Foot or Feet in measurement
ft^2	Square Feet
GWQB	Ground Water Quality Bureau
HAFB	Holloman Air Force Base
H_2S	Hydrogen Sulfide
HEPA	High Efficiency Particulate Air
in	inches
Kg	Kilograms
km	kilometers
lb	Pounds
$\mu g/m^3$	micrograms per cubic meter
m	meter
m^2	Square Meters
m^3	Cubic Meters
mi	miles
MSDS	Material Safety Data Sheet
msl	mean sea level

NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMNHP	New Mexico Natural Heritage Program
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRTF	National Radar Test Facility
O_3	Ozone
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
PE	Proposed Endangered
Pb	lead
PM_{10}	Particulate Matter with an aerodynamic diameter of less than 10 microns
PT	Proposed Threatened
RAMS	RCS Advanced Measurement Site
RCS	Radar Cross Section
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SO_2	Sulfur Dioxide
SWPPP	Storm Water Pollution Prevention Plan
TES	Threatened and Endangered Species Report
TG	Test Group
TSF	Target Support Facility
TSP	Total Suspended Particulates
US	United States
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UXO	Unexploded Ordnance
WSMR	White Sands Missile Range

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1.0 INTRODUCTION

This Environmental Assessment (EA) addresses a proposal by the United States (US) Air Force 46th Test Group (TG), National Radar Cross-Section Test Facility (NRTF) Division to upgrade and modernize the Radar Cross-Section Advanced Measurement Site (RAMS) on White Sands Missile Range (WSMR) New Mexico. These actions will include the addition of an Indoor Target Flip Facility and the Advanced Target Suspension System (ATSS). The ATSS is composed of two phases: Phase One: Permanent Fixture and Phase Two: Spur Range. Reasonably foreseeable projects to be evaluated as part of the environmental analysis include: a new Paint Facility, Maintenance and Supply Facilities, Equipment Shelter building, three Administrative Facilities, six Target Storage Facilities, and Utility and Road Upgrades. Building 5018 will be removed and recycled prior to the construction of the Indoor target flip facility which is to be constructed on the former site of Building 5018. RAMS is a specialized facility for radar testing equipment and is located in the south central portion of New Mexico, in Sierra County, approximately 85 miles north of Las Cruces, New Mexico, and 100 miles north of El Paso, Texas, approximately in the center of WSMR (Figure1-1). The multiple project area is located in a tract of approximately 600 acres and is located at the lower end of Rhodes Canyon, near the Henderson Ranch and Tip Top Canyon. The multiple projects will disturb approximately 450 acres of the 600 acre tract. The actions addressed by this EA are proposed at RAMS East and includes the 5007 building cluster area.

This EA complies with National Environmental Policy Act (NEPA), Council on Environmental Equality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR 989, which implements the US Air Force Environmental Impact Analysis Process (EIAP), Army Regulation 200-2, Environmental Analysis of Army Actions, codified at 32 CFR Part 651, and other applicable federal and state environmental regulations. Section 1 of the EA provides background and an overview of the project, the purpose and need for the action, the scope of the EA, and regulatory compliance requirements. Section 2 describes the Description of Proposed Actions and Alternatives proposal in more detail, other major project aspects in the region, and summarizes the impacts of the alternatives. Section 3 provides a description of the affected environment for a range of environmental and social conditions. Section 4 discusses the environmental impacts that could result from implementing the actions under consideration. Section 5 summarizes any cumulative consequences of these actions. Section 6 provides a list of the preparers of this document. Section 7 provides a list of persons and agencies contacted in developing this document. Section 8 provides a list of references used in developing this document. Appendices identify correspondence and reports used in the development of this EA.

1.1 Background

The NRTF is the nation's premier test facility for Radar Cross Section (RCS) measurements. The RAMS site is a world-class facility designed for conducting radar tests in support of the development of low observable targets.

1.2 Purpose and Need for the Action

The Air Force NRTF proposes to upgrade and modernize the RAMS site on WSMR. The purpose of this proposed action is to modernize and upgrade the RAMS site to accommodate its current and future workload supporting numerous operations.

The 46th TG, NRTF Division, has identified requirements at the RAMS site to build an Indoor Target Flip Facility and the ATSS. Additional near term reasonably foreseeable projects to be evaluated as part of the environmental analysis include: a new Paint Facility, three Administrative Complexes, six Target Storage Facilities, Maintenance and Supply Facilities, Equipment Shelter building, and Utility Upgrades.

These requirements are driven by national testing at the NRTF.

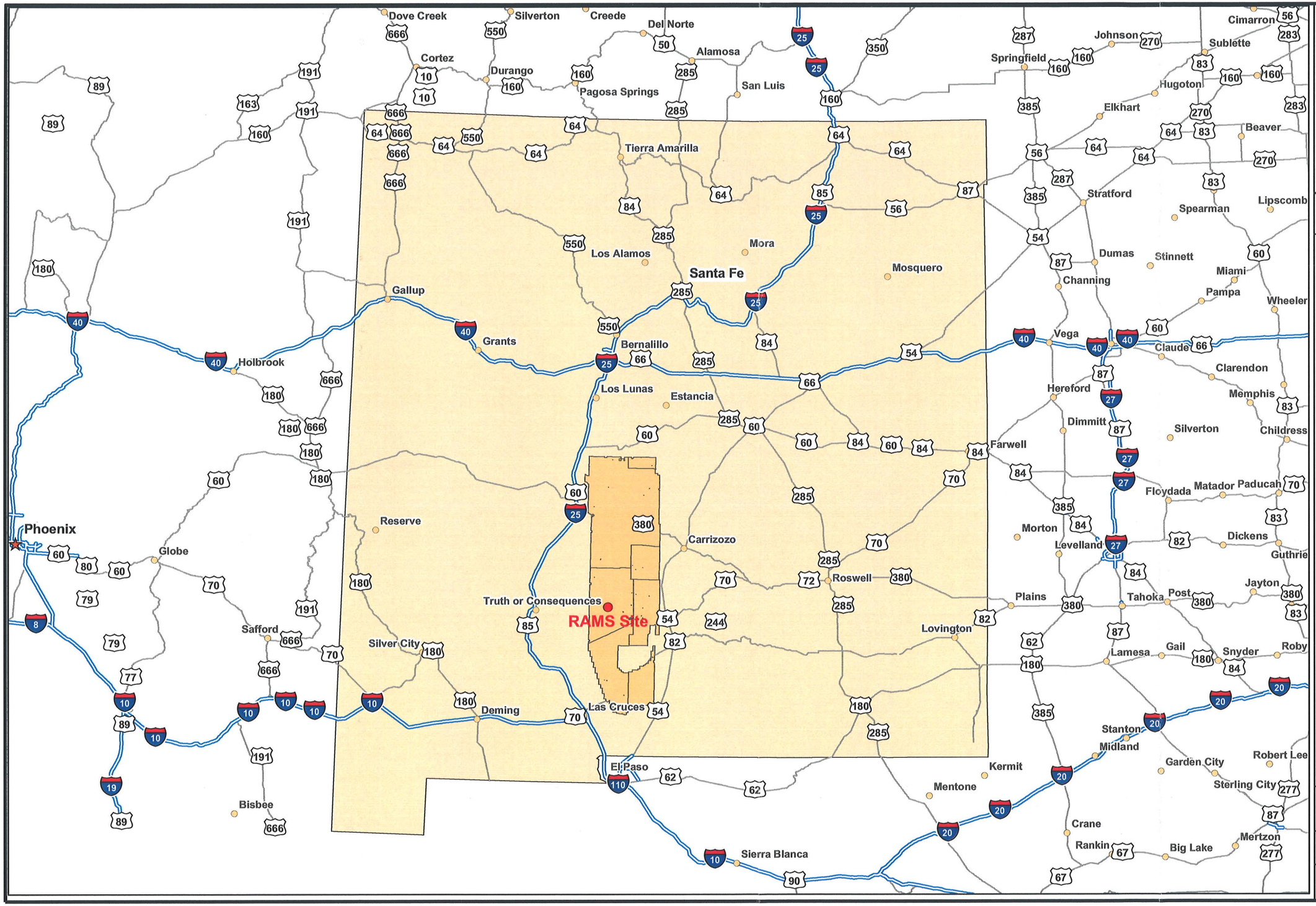
1.3 Scope of the Environmental Assessment

The upgrade and modernization of the RAMS facility will include a building disassembly and construction activities that will require leveling and clearing in a project area of approximately 600 acres. Cultural Resources and Threatened and Endangered Species surveys were performed in the undisturbed areas to be impacted by the proposed action. Potential impacts for all of the project work will be analyzed for water resources, air quality, erosion,

socioeconomics, hazardous materials, hazardous waste, cultural resources, biological resources, and other attributes potentially affected by the proposed action.

1.4 Regulatory Compliance

The EA shall adhere to current Air Force guidelines published in Air Force Instruction (AFI) 32-7061 "The Environmental Impact Analysis Process", July 6, 1999, as codified in 32 CFR 989 and Army Regulation 200-2, Environmental Analysis of Army Actions, codified at 32 CFR Part 651. Additional references for conducting an EA are found in the NEPA of 1969 (Public Law 91-190, 42 U.S.C. 4321-4347) and the Council on Environmental Quality (CEQ) Implementing Regulations (40 CFR Parts 1500-1508). The EA shall be prepared and submitted in appropriate WSMR and Air Combat Command (ACC) EA format. In addition, the CEQ NEPA regulations encourage agencies to tier environmental documents to eliminate repetitive discussions and to focus the decision-making process on the pertinent issues at each level of review (40 CFR 1502.20, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act). Tiering refers to the coverage of general matters in broad scope documents incorporating by reference, rather than repeating the general discussions and concentrating primarily on the specific issues.



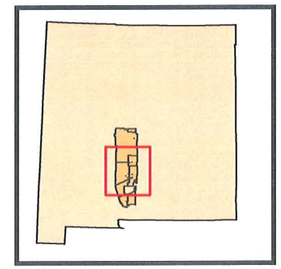


Figure 1-1
State / Site Area Projection Map

N
W E
S

White Sands Missile Range
Limited Access
Highway

0 15 30 60
Miles

Environmental Assessment

FINAL

APRIL 2005

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2.0 PROPOSED ACTION AND ALTERNATIVES

This section discusses the proposed action, alternative action one, alternative action two, and the no action alternative. Section 2.1 describes the proposed action for the EA that would allow the US Air Force to meet its purpose and need for agency action. Section 2.2 discusses alternative action one. Section 2.3 discusses alternative action two. Section 2.4 discusses the no action alternative, and alternative action(s) eliminated from further consideration are presented in Section 2.5 as a baseline for comparison with the consequence of the upgrade and modernization of the RAMS facility. Completion of either the proposed action, alternative one, or alternative two would advance the need for modernizing and upgrading the RAMS site to accommodate its current workload supporting numerous operations. Alternatives one and two are presented as options should the proposed action of a complete modernization effort not be possible.

2.1 Proposed Action

The Air Force NRTF proposes to upgrade and modernize the RAMS site on WSMR. These actions will include the addition of an Indoor Target Flip Facility and the ATSS. The ATSS is composed of two phases: Phase One: Permanent Fixture and Phase Two: Spur Range. Reasonably foreseeable projects to be evaluated as part of the environmental analysis include: a new Paint Facility, Maintenance and Supply Facilities, Equipment Shelter building, three Administrative Facilities, a Fire Suppression Tank, six Target Storage Facilities, and Utility and Road Upgrades. Building 5018 will be removed and recycled prior to the construction of the Indoor target flip facility which is to be constructed on the former site of Building 5018. The Environmental Analysis includes a Cultural Resources Survey and a Threatened and Endangered Species Survey of undisturbed areas to be impacted by the proposed action. The EA analyzes potential impacts on water resources, air quality, erosion, socioeconomics, hazardous materials, hazardous waste, cultural resources, biological resources, and other attributes affected by the proposed action.

The objective of this work effort is to prepare, complete, document, and deliver an environmental impact analysis document, including a Cultural Resources Inventory Survey Report (CRR) and a Threatened and Endangered Species (T&E) Survey Report which are separately detailed in referenced reports. The analysis shall examine the potential environmental effects that would result from the proposed action. The CRR shall document sites and artifacts that would be disturbed by the proposed action. The T&E survey report will identify any species that are threatened and endangered in the proposed action area.

Detailed descriptions for the proposed action for the RAMS Comprehensive Environmental Assessment are as follows:

1. Indoor Target Flip Facility - 170 feet (ft) wide x 200 ft long and 100 ft high building, housing a mechanical flip fixture – using a rotating type concept. Features will include one 40-ton overhead DC bridge crane, one 80 ft (width) door, two 20 ft (width) doors, lighting, and an environmentally controlled 6000 sq ft staging area. This facility will be constructed where temporary facility 5018 is currently located. Building 5018 is projected to be removed and recycled/reused at another location to be determined at a later date by the TG. Alternatively, if no recycle/reuse can be found Building 5018 will be demolished off the RAMS site, and recyclable materials will be turned in to the Defense Reutilization Management Office (DRMO), and any remaining debris will be taken to a suitable landfill.
2. Advanced Target Suspension System - Phase One: a permanent fixture will be constructed south of the Target Support Facility (TSF) building 5007. Specific installation design will be sited in an area that has been previously disturbed approximately 150 ft X 150 ft square, south of the TSF, and the 440-volt power requirement will be met by extending service from the TSF. Phase Two: The ATSS Spur Range is a 1200 foot rail system that will require an area extending from the center of the TSF to be leveled and properly graded in support of testing.

Additional projects associated with the modernization of RAMS, to be located throughout an area bounded on the north by Range Road 6, with the site access road as the western boundary, the building 5007 (TSF) area as the southern boundary, and a line 1500 ft from the access road as the eastern boundary as well as an area bounded by

a half mile radius from building 5007. The area indicated is approximately 600 acres and consists of both disturbed and undisturbed lands.

1. Paint Facility - The paint facility will be of a prefabricated metal building construction. The Paint Facility will incorporate a Model Fabrication Shop used to design, build, and modify test items on site. The painting materials and chemicals associated with this operation will be limited to small quantities based on touch-up coatings and will be coordinated through the environmental function for handling and disposal procedures. The facility will use the most current state of the art air emission controls. The associated material safety data sheets will be provided. The facility will be approximate 150 ft long X 110 ft wide X 50 ft high, and will have: High Efficiency Particulate Air (HEPA) filtration system, unisex restroom and holding tank, a paved 1800 sq ft parking area, underground utilities for safety measures, and will be occupied by five to seven personnel on an alternating basis. Heating will be accomplished using propane gas heaters.
2. Maintenance Facility - to be a single-story prefabricated metal construction, 100 ft long X 110 ft wide X 40 ft high. The building includes a 30-ton overhead crane, intrusion detection/ fire alarm system, an equipment/store room, hydraulic lift, compressed air, two or more offices, a break room, and a unisex restroom. The primary function of this facility is for minor vehicle servicing and repair, support equipment repair, and a tire servicing area. All sewer lines will be routed to a holding tank shared by each facility, and all liquid waste will be hauled to approved disposal facilities as needed. Heating will be accomplished using propane gas heaters.
3. Supply Facility - will be a single-story prefabricated metal construction, 100 ft long X 110 ft wide X 40 ft high. This building plan includes a 30-ton overhead crane, intrusion detection/ fire alarm system, an equipment/store room, compressed air, two or more offices, a break room, and a unisex restroom. The primary function of this facility is for warehousing, shipping/receiving materials, and supplies. All sewer lines will be routed to a holding tank shared by each facility, and all liquid waste will be hauled to approved disposal facilities as needed. Heating will be accomplished using propane gas heaters.
4. Equipment Shelter Building - will be a single-story prefabricated metal construction, 140 ft long X 50 ft wide X 30 ft high. The only utility required is lighting. This facility will be used to store support equipment and fixtures indoors, out of the elements.
5. Three Administration Complexes – Each complex will consist of an administration building, two storage buildings, and two administrative buildings will have small parking lots consisting of five spaces. The administrative buildings will consist of a single-story, prefabricated metal building construction and will be approximately 150 ft long X 200 ft wide X 30 ft high. The main administrative facilities will house the Air Force Project Office (AFPO) and the Operation and Maintenance (O&M) Contractor Management offices, and a 45,000 ft^2 parking lot will be constructed to support operations adjacent to the facility. Personnel at these facilities will fluctuate from 80 to120 on a weekly basis (average 25 to 50 people per day for all three shifts). The Administrative buildings will include two separate restrooms each and will be located at each end of the facility. The operation of these facilities will be limited to offices, conference rooms, and a limited dining area. Handicapped and limited mobility access will be incorporated into the facility designs. Service drops from existing aerial electric communication cable and fiber-optic lines are already available near the possible locations. Where unavailable underground power and telephone lines will be connected for the new buildings. All sewer lines will be routed to an above ground waste storage tank for each of the three Administrative Complexes, and all liquid waste will be hauled to approved disposal facilities as needed. Heating will be accomplished using propane gas heaters. In addition 40 ft X 2 mi. of pavement will be added for roads to support Administration Complexes and Storage Buildings.
6. Fire Suppression Tank - with a 100,000 gallon capacity, will be required to support the fire suppression system.
7. Six Target Storage Facilities - of prefabricated metal construction, 100 ft long X 110 ft wide X 40 ft high. These buildings will include a 30-ton overhead crane, intrusion detection/ fire alarm system, an equipment room, two or more offices, a break room, and a unisex restroom. The new facilities will support numerous test operations occurring throughout the life cycle of weapons systems. All sewer lines will be routed to a holding tank shared

by each facility, and all liquid waste will be hauled to approved disposal facilities as needed. Heating will be accomplished using propane gas heaters.

8. Utility Upgrades - would be required to bury power cables underground to eliminate or minimize radar reflections during testing and to aid safety in target handling with large lifting devices and support equipment. Utility routes would be adjacent to current utility locations. Improvements will also be made to the site well by employing a larger water pump and additional water storage capability, located adjacent to the proposed Target Support Facilities in` a previously disturbed area. The area between buildings 5007 and the Target Flip Facility will be paved replacing a gravel roadbed. Additional roads may be constructed to access the proposed facility additions.

2.2 Alternative One

This alternative projects the on-site construction of the following facilities to advance the modernization and upgrade of the RAMS site.

1. Indoor Target Flip Facility – This facility as described in more detail in the proposed action consists of a 170 feet (ft) wide x 200 ft long and 100 ft high building, housing a mechanical flip fixture – using a rotating type concept. Features will include one 40-ton overhead DC bridge crane, one 80 ft (width) door, two 20 ft (width) doors, lighting, and an environmentally controlled 6000 sq ft staging area.
2. Advanced Target Suspension System - This facility as described in more detail in the proposed action consists of Phase One: a permanent fixture will be constructed south of the Target Support Facility (TSF) building 5007., and Phase Two: The ATSS Spur Range consisting of a 1200 foot rail system that will require an area extending from the center of the TSF to be leveled and properly graded in support of testing.

2.3 Alternative Two

This alternative expands the construction identified in alternative one for the RAMS site modernization and upgrade to include the following facilities.

1. Indoor Target Flip Facility – This facility as described in more detail in the proposed actions consists of a 170 feet (ft) wide x 200 ft long and 100 ft high building, housing a mechanical flip fixture – using a rotating type concept. Features will include one 40-ton overhead DC bridge crane, one 80 ft (width) door, two 20 ft (width) doors, lighting, and an environmentally controlled 6000 sq ft staging area.
2. Advanced Target Suspension System - This facility as described in more detail in the proposed actions consists of Phase One: a permanent fixture will be constructed south of the Target Support Facility (TSF) building 5007., and Phase Two: The ATSS Spur Range consisting of a 1200 foot rail system that will require an area extending from the center of the TSF to be leveled and properly graded in support of testing.
3. Paint Facility - This facility as described in more detail in the proposed actions consists of a paint facility will be housed in a prefabricated metal building. The facility will be approximate 150 ft long X 110 ft wide X 50 ft high, and will have: High Efficiency Particulate Air (HEPA) filtration system, unisex restroom and holding tank, a paved 1800 sq ft parking area, underground utilities for safety measures, and will be occupied by five to seven personnel on an alternating basis.
4. Maintenance Facility - This facility as described in more detail in the proposed actions consists of a single-story prefabricated metal construction, 100 ft long X 110 ft wide X 40 ft high. The building will include a 30-ton overhead crane, intrusion detection/ fire alarm system, an equipment/store room, hydraulic lift, compressed air, two or more offices, a break room, and a unisex restroom.
5. Supply Facility - This facility as described in more detail in the proposed actions consists of a single-story prefabricated metal construction, 100 ft long X 110 ft wide X 40 ft high. This building plan includes a 30-ton overhead crane, intrusion detection/ fire alarm system, an equipment/store room, compressed air, two or more offices, a break room, and a unisex restroom.

6. Equipment Shelter Building - This facility as described in more detail in the proposed actions consists of a single-story prefabricated metal construction, 140 ft long X 50 ft wide X 30 ft high. This facility will be used to store support equipment and fixtures indoors, out of the elements.

2.4 No Action Alternative

As part of the environmental analysis, NEPA requires the proponent to evaluate other alternatives to include the No Action alternative. The No-Action Alternative would involve no construction of new facilities or enhancement to current capabilities. The NRTF, of which RAMS is a significant part, is the single most capable facility of its kind and national defense priorities include expanded leading edge research of the type conducted at the RAMS site. This research has been, and is being, funded by Congress and private enterprise. The No Action Alternative would result in inadequate capability to conduct the tests required by national policy. Therefore the No Action alternative is not a preferred alternative.

2.5 Eliminated Alternatives

The RAMS comprehensive expansion planning assessed other possible alternatives which would meet current site operational requirements.

Important RAMS site background: In the early 1980's the current RAMS site was selected after several areas in the western United States were considered including several off-WSMR sites. In the site selection process over 65 sites were identified that contained the required flat plane. However, only ten sites had some or all of the drop-off required for least cost construction. The current RAMS site (Rhodes Canyon) met all of the selection criteria: 1) cost of construction, 2) cost of new power lines and roads, 3) interaction between WSMR and RAMS operations, 4) environmental factors, and 5) decontamination of unexploded ordnance.

The criteria used to screen and consider potential project site locations for the RAMS proposed projects included:

- Facility locations to be in close proximity to the current RAMS operational facilities area and the need to have new facilities relatively near to the current support facility cluster (to be within one mile);
- Be able to use the current transportation (road system) and utility infrastructure;
- Topography-site locations that would require minimum fill or excavation and locations that would not alter the arroyo drainage patterns and negatively affect storm water runoff;
- Location of facilities that would not require a major upgrade of the current security physical system and enable the current security operations to include the new project area without major manpower increases;
- Evaluate areas that had previously been surveyed for threatened and endangered species and cultural impacts;
- The need to have new facilities separate to support operational requirements of testing at RAMS; and
- Would not have a negative impact on the mission of the NRTF.

Alternatives Considered but not Carried Forward

Alternative 1. Consolidate New Facilities into One Complex:

Separate facilities are required based on operational requirements. Consolidating these facilities into one complex would not accommodate site administration requirements.

Alternative 2. Expand Building 5018:

Building 5018 is a temporary structure. The structure design does not support expansion to accommodate the proposed Indoor Target Flip Facility.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

Section three describes the existing environmental and social conditions that would be affected by the proposed action and alternatives. The environment described in this Section is the baseline for the consequences that will be presented in Section four. The Region of Influence (ROI), or study area for each resource category will guide the scope of the descriptions for the environmental baseline conditions, and will focus on the geographic area where the Proposed Action or Alternatives might reasonably be expected to directly or indirectly affect those resources.

In compliance with NEPA, CEQ guidelines, 32 CFR 989, and 32 CFR 651, this section description of the affected environment will focus on those resources that may potentially be subjected to impacts created by the proposed actions. The resources and conditions description include: geologic resources and climate, land use, biological resources, water resources, floodplains, cultural resources, air quality, noise, airspace management, safety, outdoor recreation, infrastructure, hazardous materials and waste management, socioeconomics, and environmental justice.

3.2 Geological Resources and Climate

3.2.1 Topography

New Mexico consists of 121,598 square miles (mi.^{2}) (77,822,720 acres) of land, with the eastern third part of the state being covered by the Great Plains. The mean elevation of the state of New Mexico is 5,700 ft above mean sea level. RAMS is located in the south central portion of New Mexico in the center of WSMR in Sierra County, which is approximately 85 miles north of Las Cruces, New Mexico, and 100 miles north of El Paso, Texas. This is on the western margin of the Tularosa Basin, a far southeast member of the Basin and Range physiographic province of the mountain west. RAMS is located on the lower piedmont (bajada) of the San Andres Mountains, on a small portion of the very wide alluvial fan where Rhodes Canyon opens out into the Tularosa Basin. The San Andres Mountains run north-south and rise approximately 5,000 ft above the Tularosa Basin's lowest point (3,878 ft.). Small canyons run east-west off of eastern and western slopes of the mountain range, forming a topographic mosaic of piedmont bajadas and basin bottom dissected by arroyos. The Tularosa basin was formed by faulting that occurred 12 to 15 million years ago. Between 300,000 to 500,000 years ago, the Rio Grande carried and deposited sediment loads to the basins in southern New Mexico, far west Texas, and northern Mexico filling them to modern levels. The San Andres Mountains are the uplifted western side of the very large old fault system that produced the Tularosa Basin, consisting of westward dipping formations of Paleozoic limestones, dolomite, sandstones, and shales. The visible portions of this scarp stand 40 ft above the modern surface on the low side of the fault. Above the recent scarp, the granite and limestone bedrock of the old fault has been weathered back so that the present mountain front is several miles west. Between the scarp and the mountain front, the eroded bedrock is buried by alluvium, which washed out of Rhodes Canyon. The alluvial fan slopes eastward at a two degree down slope to the fault scarp drop off, and consists of three separate components each having a slightly different elevation (Figure 3.2.1-1, WSMR Topography).

3.2.2 Soils

The soils on White Sands Missile Range are varied, with much of it consisting of gypsum forming the white sands that have been deposited as high evaporation rates dried up the lakes that existed in the area. The predominant soil orders are aridisols and entisols, which are susceptible to wind and water erosion. Aridisols are soils that have little soil development, high pH, and are typically found in areas of low rainfall. Entisols also have little soil horizon development and are found in areas where the soil profile changes frequently, as in floodplains and regions with high wind erosion. The soil temperature is thermic. The western alluvial slopes consist of well-drained silt-loam calcareous soils associated with the Mimbres-Glendale and Duneland-Dona Ana Complex. The Lake Lucero playa and Alkali Flats are flat or very gently sloping gypsum soil of a fine silty texture that is poorly drained due to a high water table. High evaporation rates have left behind accumulated gypsum salts, and with strong spring winds from the southwest much of the gypsum has moved about to create the dunes of White Sands National Monument. The white sand dunes are comprised of granules of nearly pure hydrated calcium sulfate and range up to 50 ft in height.

Annual dune movement varies from 30 feet per year to nearly stationary where vegetation predominates. Older dune deposits are stabilized and have extensive crust and some vegetation typical of the Duneland-Yesum Association. East and South of the dune field is mostly flat, deep, well drained, wind deposited soil of moderately coarse texture and very high in gypsum content of the Yesum-Holloman Association (Figure 3.2.2-1, Soils Map for WSMR).

3.2.3 Climate

WSMR is located within the Chihuahuan semi-desert ecoregion and has a semi-arid to arid, subtropical desert climate characterized by low rainfall, relatively low humidity, hot summers, moderate winters, wide temperate variations, and an abundance of sunshine throughout the year. Although winds in the region can be strong and gusting in the vicinity of a thunderstorm, typically they are relatively low, averaging 5 miles per hour. The prevailing wind direction is from the west, although southerly winds are common during the warmer months. The atmosphere in the region is generally well mixed. The seasonal and average annual mixing heights can vary from 400 meters in the morning to 4,000 meters in the afternoon. The morning mixing heights are usually low, due to nighttime heat loss from the ground, which produces surface based temperature inversions. After sunrise, these inversions quickly break up, and solar heating of the earth's surface results in good vertical mixing in the lower layers of the atmosphere. Dust is frequently entrained in the atmosphere due to gusting winds and the semiarid climate. Most of the seasonal dust storms occur in March and April, when wind speeds are higher.

Historical weather records indicate between the years 1939 to 2003 an average annual precipitation of 8.92 inches, with a record low of 2.80 inches and a record high of 20.89 inches. Over half of the annual precipitation occurs in the months of July, August, and September. Brief but heavy rainstorms can cause localized flooding during these months. A small percentage of annual precipitation falls in the form of snow. It is not uncommon for periods of extreme dryness to last for several months.

Temperatures are generally warm with highs around 55 degrees Fahrenheit (°F) during the winter and ranging to highs in the summer exceeding 90 °F. The annual average temperature is 59.7 °F, with a record low of -25 °F and a record high of 111 °F. Daytime humidity is generally low, ranging from 10 to 14 percent. Due to the mountainous terrain and the low lying basins there are large diurnal and regional fluctuations in relative humidity.

The annual evaporative rate is more than ten times than annual precipitation rate due to high temperatures, low relative humidity, lots of sunshine, and continuous winds. The annual pan evaporative rate measured by the National Oceanic and Atmospheric Administration (NOAA) from shallow pans is about 105 inches per year, while the average evaporation rate from deeper lakes in the region ranges from approximately 72 to 80 inches per year.

3.3 Land Use

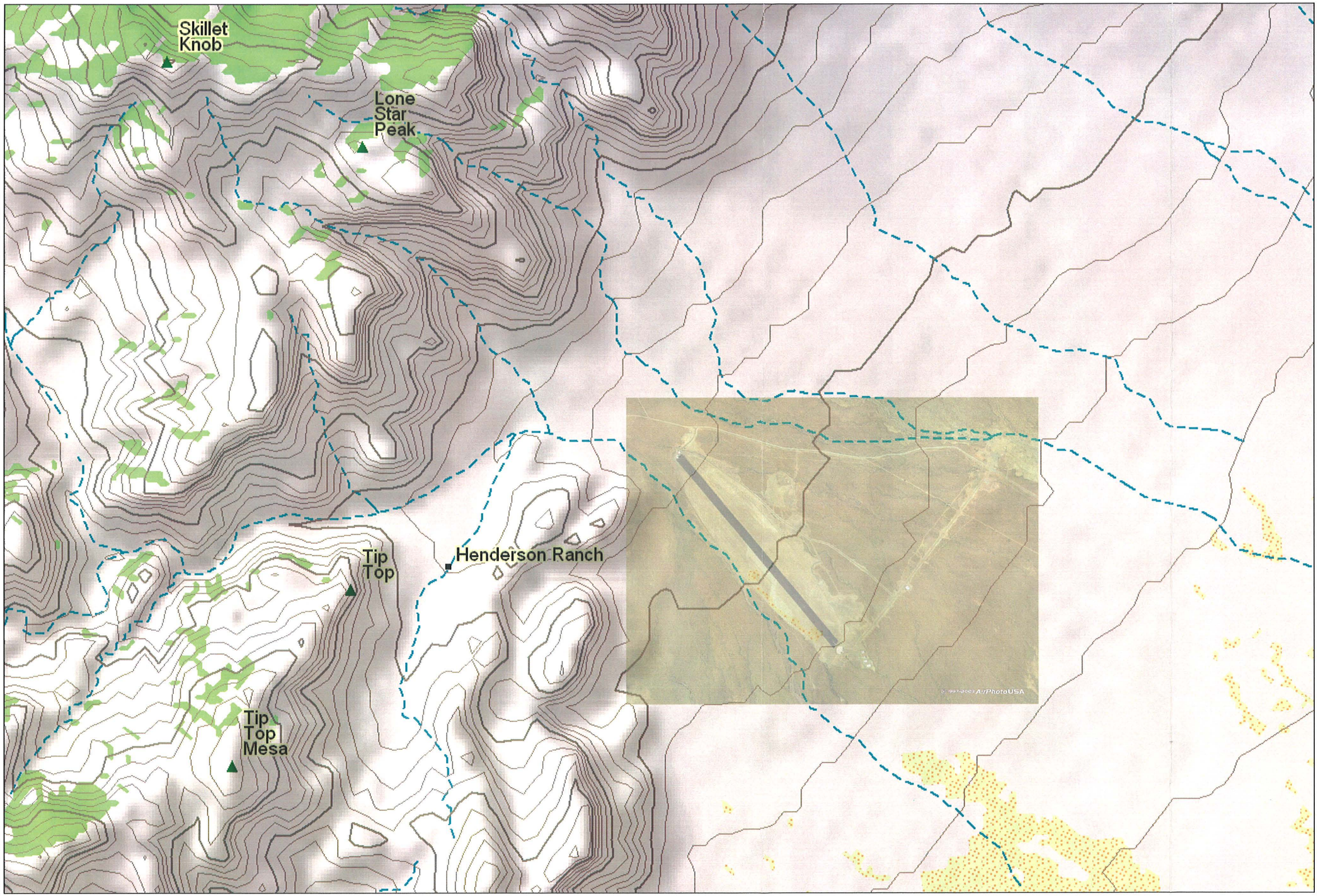
3.3.1 Land Use at RAMS and Surrounding Area

The site is located at the base of the San Andres Mountains. The site is used as a radar test range and is operated 24 hours a day, 7 days a week, and 52 weeks per year. The number of personnel on site will be as high as 25 with a potential surge of an additional 50 personnel. The adjacent lands are all within WSMR and are used to support a variety of military training, testing, development and other governmental programs (see Figure 3.3 -1, Land Use on WSMR).

3.4 Biological Resources

3.4.1 Regional Vegetation

Historically, the ecoregion was described as lush, shrub-free grasslands used extensively for cattle grazing between 1875 -1945. High biodiversity at WSMR is due to several factors such as elevation, topography, and geology. In fact, among desert ecoregions, the Chihuahuan Desert has particularly high biodiversity. For example, over 1,100 plant species have been recorded from recent vegetation mapping efforts and WSMR is known to support 160 native grass species, more than 35 cacti species, 130 springs, undisturbed ponderosa pine forests, and diverse wildlife. Grazing and invasive species have had some affect, but possibly of greater affect have been the climatic warming, and shift to the summer monsoon/winter snow regime, of the last 100+ years. Three prevalent vegetation classes



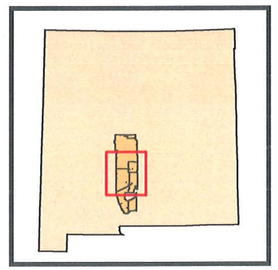


Fig 3.2.1-1
RAMS Site Topography

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0 2,700 5,400 Feet

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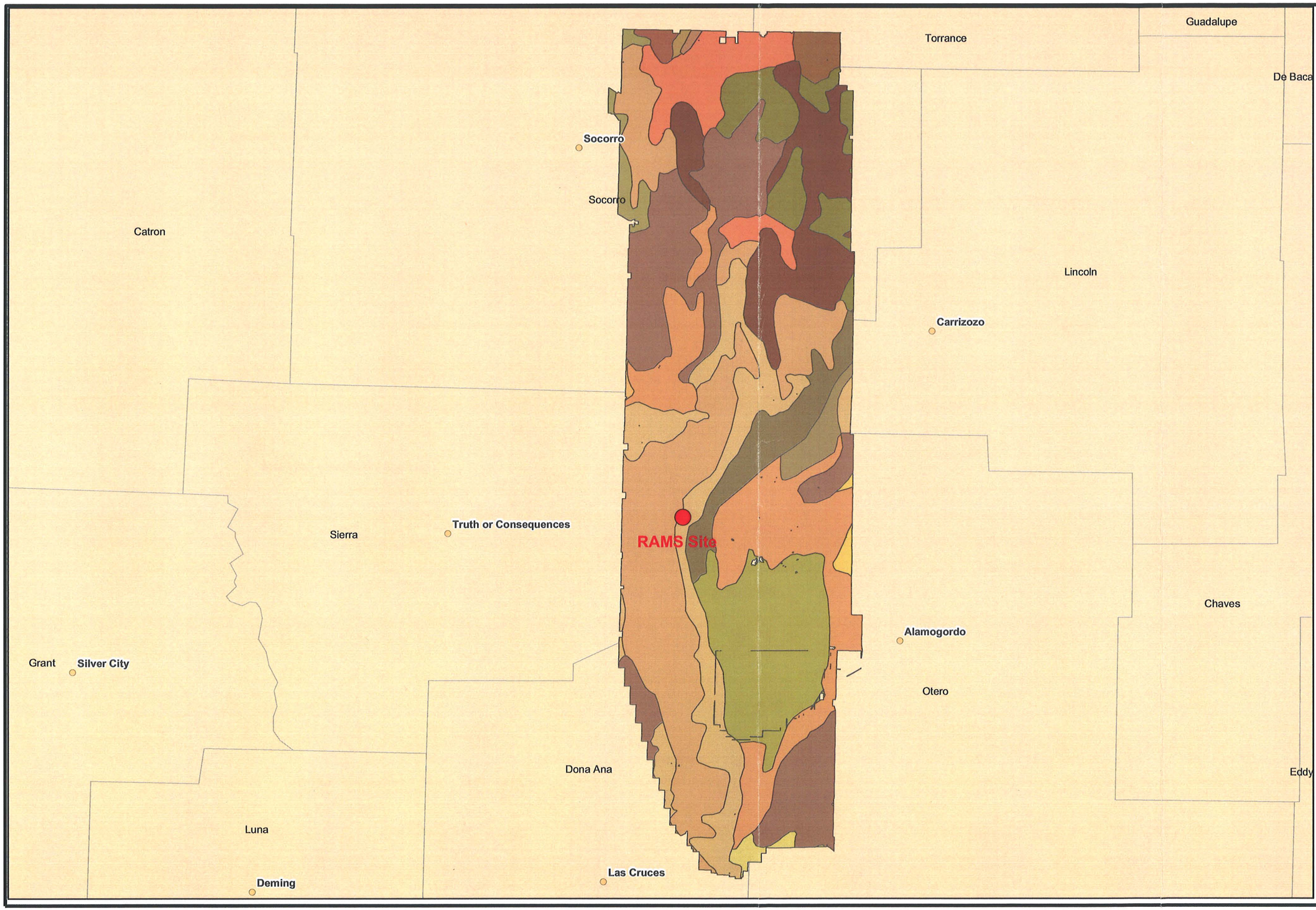

Figure 3.2.2-1
Soil Types

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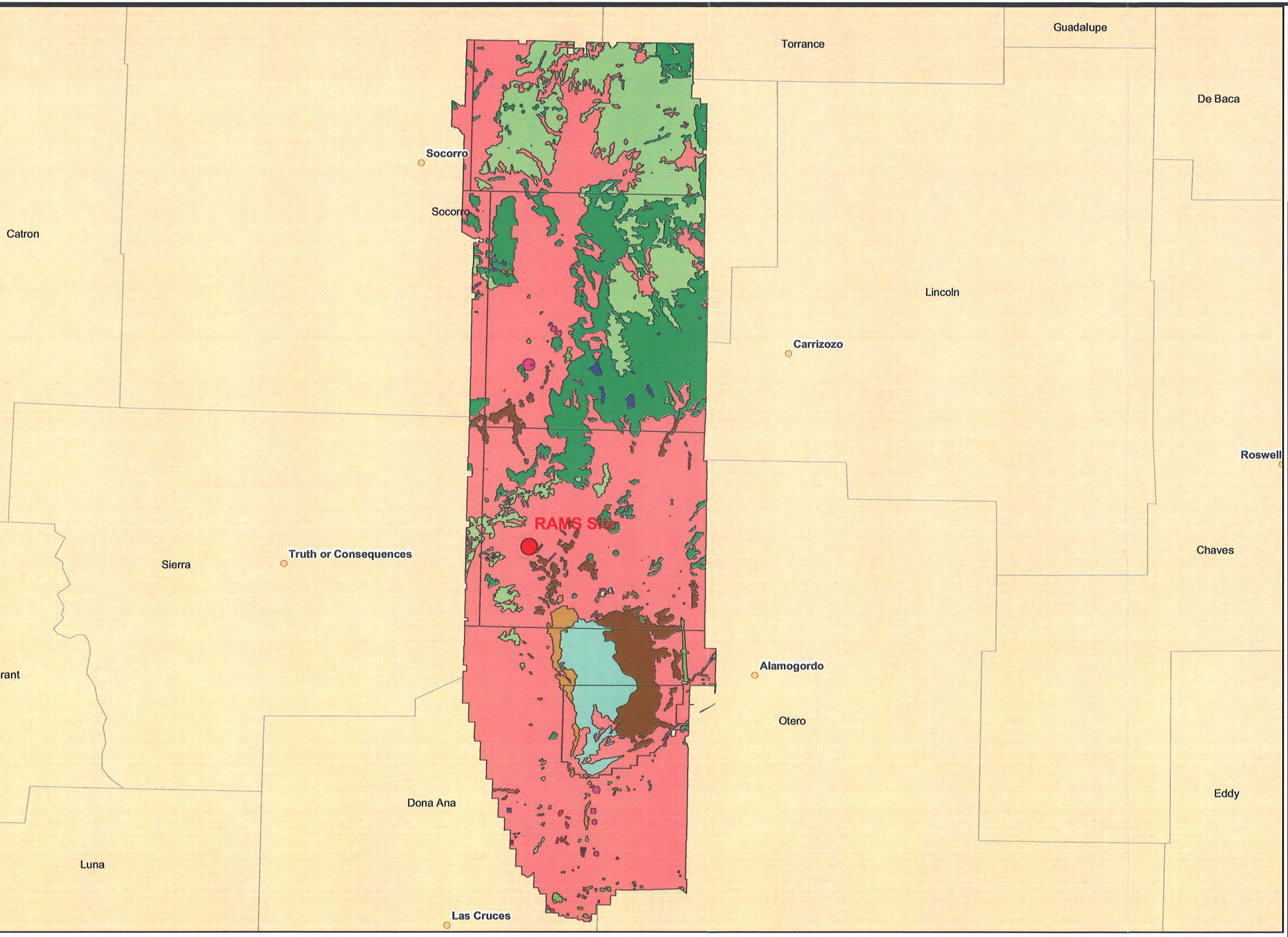

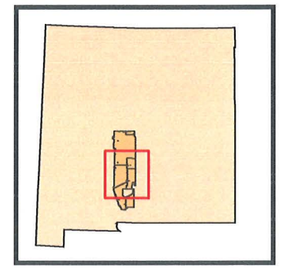

Figure 3.3-1
Land Use

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Land Use Classification

- Residential
- Commercial and Services
- Industrial
- Transportation, Comm., and Utilities
- Other Urban
- Cropland and Pasture
- Other Agricultural Land
- Herbaceous Rangeland
- Shrub and Brush Rangeland
- Mixed Rangeland
- Evergreen Forest Land
- Streams and Canals
- Lakes
- Reservoirs
- Forested Wetland
- Nonforested Wetland
- Dry Salt Flats
- Sandy Areas Other than Beaches
- Bare Exposed Rock
- Strip Mines, Quarries, Gravel Pits
- Transitional Areas
- Mixed Barren Land

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occur within WSMR: woodlands, shrublands, and grasslands. At the RAMS project site, the only vegetation community present is semi-desert shrublands.

Semi-desert shrublands, covering approximately 12 percent of WSMR, are characterized by creosotebush (*Larrea tridentata*), tarbush (*Flourensia cernua*), and western honey mesquite (*Prosopis glandulosa var. torreyana.*). Wide belts of shrubs, which are somewhat evenly placed, are located just below the foot slope grasslands and just higher than mesquite dominated grasslands. These semi-desert shrublands are found on strongly calcareous soils with a gravelly loam surface layer over a hard caliche layer. These soils are found between 9 and 55 percent slope gradients, are almost always severely eroded, and support a dominance of creosotebush.

Soil associations underlying the project area include: Nickel-Tencee, Mimbres-Glendale, and rockland. RAMS is located on the Nickel-Tencee association, which is a well-drained, gravelly loam on gently sloping to sloping mountain front alluvial fans. Slopes for this soil association range from three to nine percent. The Mimbres-Glendale association is a deep, well-drained strongly calcareous silt loam on nearly level to gently sloping lower alluvial fans and is in the basin to the east. One to three percent slopes are typical for this association. Rockland associations occur on steep, rough topography on sedimentary and igneous rock formations and are found primarily at the scarp to the west.

3.4.2 Regional Wildlife

The biodiversity for birds, mammals, and reptiles is high on WSMR due to the wide range of altitudes (from 3,878 ft at the Basin's lowest point to 8,958 ft at Salinas Peak, the highest point on WSMR), topographies, and resultant habitat types. The creosotebush shrublands alone support a variety of animals (Table 3.4.2-1).

Table 3.4.2-1 Animal Species of Reported or Probable Occurrence in Creosotebush Shrubland on WSMR and/or Sierra County

Scientific Name	Common Name
Arizona elegans	Glossy snake
Cnemidophorus neomexicanus	New Mexico whiptail lizard
Cophosaurus texanus	Greater earless lizard
Crotalus atrox	Western diamondback rattlesnake
Crotalus viridis	Prairie rattlesnake
Gambelia wislizenii	Longnose leopard lizard
Holbrookia maculata	Lesser earless lizard
Masticophis flagellum	Coachwhip
Masticophis taeniatus	Lined whipsnake
Phrynosoma cornutum	Texas horned lizard
Phrynosum modestum	Roundtail horned lizard
Pituophis melanleucas	Sonoran gopher snake
Rhinocheilus lecontei	Longnose snake
Sceloporus magister	Desert spiny lizard
Sceloporus undulatus	Fence lizard
Spea multiplicata	New Mexico spadefoot
Uta standburiana	Side-blotched lizard
Amphispiza bilineata	Black-throated sparrow
Auriparus flaviceps	Verdin
Buteo swainsoni	Swainson's hawk
Callipepla gambelii	Gambel's quail
Cardinalis sinuatus	Pyrrhuloxia
Chordeiles acutipennis	Lesser nighthawk
Geococcyx californianus	Greater roadrunner
Mimus polyglottos	Northern mockingbird

Scientific Name	Common Name
Myiarchus cinerascens	Ash-throated flycatcher
Picoides scalaris	Ladder-backed woodpecker
Polioptila melanura	Black-tailed gnatcatcher
Salpinctes obsoletus	Rock wren
Toxostoma curvirostre	Curve-billed thrasher
Zenaida macroura	Mourning dove
Ammospermophilus interpres	Texas antelope ground squirrel
Canis latrans	Coyote
Chaetodipus intermedius	Rock pocket mouse
Conepatus mesoleucus	Common hog-nosed skunk
Dipodomys merriami	Merriam's kangaroo rat
Lepus californicus	Black-tailed jackrabbit
Lynx rufus	Bobcat
Neotoma albigula	White-throated wood rat
Odocoileus hemionus	Mule deer
Onychomys arenicola	Mearn's grasshopper mouse
Oryx gazella	Oryx
Perognathus flavus	Silky pocket mouse
Peromyscus eremicus	Cactus mouse
Sylvilagus audubonii	Desert cottontail
Taxidea taxus	Badger
Thomomys bottae	Botta's pocket gopher

Source: Threatened and Endangered Species Survey Report For RAMS Environmental Assessment, November 2004

Reptiles found in this habitat include the longnose leopard lizard (*Gambelia wislizenii*), which occupies the intershrub space and feeds on insects and smaller lizards. It typically uses woodrat (*Neotoma spp.*) middens as shelters. Various whiptail lizards (*Cnemidophorus spp.*) are common, particularly in disturbed areas. Other reptiles found on the WSMR in shrubland associations include the coachwhip (*Masticophis flagellum*), the lined whipsnake (*M. taeniatus*), the Sonoran gopher snake (*Pituophis melanoleucas*), and the prairie rattlesnake (*Crotalus viridis*). Almost any of these reptiles in Table 3.4.2-1 may be found in the arroyo riparian habitat at any given time since they use the washes as travel corridors and for cover. The western diamondback rattlesnake (*C. atrox*) has been documented in every habitat type on the WSMR other than the gypsum dunes.

Of the 500 species of birds known to occur in New Mexico, 298 species (60 percent) occur on the WSMR. The arid shrublands combined (creosotebush, acacia and mesquite) support about 90 species of birds. The birds that occur in the creosotebush shrublands (Table 3.4.2-1) include raptors, passerine birds, and threatened and endangered species. Several of the birds found in creosotebush shrubland are listed as highest priority species, meaning that they may warrant conservation action because of low occurrence or threats to their continued reproductive success. These include Gambel's quail, which roosts in dense, thorny shrubs such as mesquite and cholla, and the black-tailed gnatcatcher, which is an open cup nester in thorny shrubs. Arroyo riparian habitats host a variety of bird species including neotropical migrants (see "Threatened, Endangered or Sensitive Species" below for more information). Neo-tropical migratory birds and other migratory birds listed under the Federal Migratory Bird Treaty Act (MBTA) have been observed in the region and in the proposed project area (i.e. Black-Throated Sparrow, Curve-Billed Thrasher, Northern Mockingbird, Verdin, Cactus Wren, Black-Tailed Gnatcatcher, Ash-Throated Flycatcher, etc. See Table 3.4.2-1). Several of these migratory bird species would be expected to inhabit and breed/nest in the proposed project area.

Small mammals typical of the arid shrublands associated with gravelly or rocky soils include a variety of mouse (*Chaetodipus spp.*), squirrel (*Ammospermophilus spp.*), and woodrat (*Neotoma spp.*) species. Larger mammals

include the common hog-nosed skunk (*Conepatus mesoleucus),* black-tailed jackrabbit (*Lepus californicus*), bobcat (*Lynx rufus),* badger (*Taxidea taxus*) and desert cottontail (*Sylvilagus audubonii).* The more rugged and rocky portions of the arid shrubland habitat may also be used by gray fox (*Urocyon cinereoargenteus*), western spotted skunk (*Spilogale gracilis*), and mountain lion (*Puma concolor*). Arroyo riparian habitat hosts additional mammal species including coyote (*Canis latrans*), black bear (*Ursus americanus*), mule deer (*Odocoileus hemionus*) and porcupine (*Erethrizon dorsatum*). In general, wildlife species are associated with specific habitats defined by the vegetation composition, some species are obligate to certain habitats, while other species are generalist and do not require one specific habitat type.

Plains, Great Basin, and desert grassland communities are represented by the following floristic communities: Plains and Mesa Grassland; Desert Grassland (ecotone); Southwest Plateau, Plains Dry Steppe and Shrub Province; Chihuahuan Desert Province; and Great Plains-Palouse Dry steppe Province.

Forest communities are primarily coniferous with few deciduous species. The forest community is composed of the following woody associations: juniper savanna, coniferous and mixed woodland, montane coniferous forest, subalpine coniferous forest, and portions of the Mountain Semi-desert Province, Southwest Plateau and Plains Dry Steppe and Shrub Province.

3.4.3 Threatened and Endangered Species

The Endangered Species Act (ESA) [16 U.S.C. 1531 et. seq.] of 1973, as amended, was enacted to provide a program to preserve federally threatened and endangered species and to protect the ecosystems upon which these species depend. All Federal agencies are required to implement protection programs for the designated species and to use their authorities to further the purpose of the Act. The Secretary of the Interior and the Secretary of Commerce are responsible for identifying threatened or endangered species and developing and implementing any potential recovery plans.

The USFWS and the National Oceanic and Atmospheric Administration (NOAA) Fisheries share responsibility for administering the ESA. Generally, the NMFS deals with anadromous fish and species occurring in marine environments, while the USFWS is primarily responsible for terrestrial and freshwater species and migratory birds. Under the ESA, the USFWS responsibilities include the following:

1. Identification of listed terrestrial species
2. Identification of critical habitat for listed species
3. Implementation of research on, and recovery efforts for, these species
4. Consultation with other federal agencies concerning measures to avoid harm to listed species

An endangered species is one that is in danger of extinction throughout all or a significant portion of its historic range. A threatened species is one that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Species may be considered endangered or threatened if they meet any of the five following criteria:

1. The current/imminent destruction, modification, or curtailment of their habitat or range
2. Overuse of the species for commercial, recreational, scientific, or educational purposes
3. Disease or predation
4. Inadequacy of existing regulatory mechanisms
5. Other natural or human-induced factors affecting continued existence (USFWS 2004a).

In addition, the USFWS further classifies species as candidates (C), proposed threatened (PT), and proposed endangered (PE). The candidate designation includes species for which the USFWS has identified threats to their continued existence, has sufficient information on hand to support their being listed as either endangered or

threatened, and are likely to be proposed for listing in the near future. Proposed species are those that have been formally submitted to Congress for official listing as threatened or endangered.

The ESA also calls for the designation and conservation of critical habitat, which is defined as areas of land, water, and air space that an endangered species needs for survival. These areas include sites with food and water, breeding areas, cover or shelter sites, and sufficient habitat to provide for normal population growth and behavior. One of the primary threats to threatened and endangered species is the destruction or modification of essential habitat areas.

3.4.3.1 Federal Listings

A total of nine federally listed endangered, threatened, or candidate species either occur or potentially occur within Sierra County, New Mexico (Table 3.4.3.1-1). There is no critical habitat for any of these species on or near the project area. Five species, Todsen's pennyroyal (*Hedeoma todsenii*), Gila trout (*Oncorhynchus gilae gilae*), Rio Grande silvery minnow (*Hybognathus amarus)*, Northern Aplomado falcon (*Falco femoralis septentrionalis)* and the Southwestern willow flycatcher (*Empidonax traillii extimus*) are listed as endangered. Three species are listed as threatened, Chiricahua leopard frog (*Rana chiricahuensis*), the bald eagle (*Haliaeetus leucocephalus*), and the Mexican spotted owl (*Strix occidentalis lucida*); and one is a candidate species, the Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

Table 3.4.3.1-1 Federally Listed Species of Sierra County, New Mexico

Common Name Scientific Name	Federal Status	Preferred Habitat Description	Potential to Occur in Proposed Project Area
Todsen's pennyroyal *Hedeoma todsenii*	E	Steep gravelly north- and east-facing hillsides with limestone soils at about 6,000 ft in elevation.	No suitable habitat in the project area. Presumed absent.
Gila trout *Oncorhynchus gilae gilae*	E	Small, cool, clear mountain streams with riparian canopy; deep pools are necessary during droughts.	No suitable habitat in the project area. Presumed absent.
Rio Grande silvery minnow *Hybognathus amarus*	E	Flowing Plain Streams.	No suitable habitat in the project area. Presumed absent.
Chiricahua leopard frog *Rana chiricahuensis*	T	Occurs in a wide variety of habitats at a wide range of altitudes in pine and pine-oak forests with permanent water ponds of moderate depth as well as montane streams.	No suitable habitat in the project area. Presumed absent.
Bald Eagle *Halieaeetus leucocephalus*	T	Near streams and lakes, some "dry land" areas near the Pecos Valley and the Sandia, Manzo, Capitan, and Sacramento Mountains.	No suitable habitat in the project area. Presumed absent.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	C	Riparian zones of otherwise arid areas.	No suitable habitat in the project area. Presumed absent.
Northern Aplomado falcon *Falco femoralis septentrionalis*	E	Savannahs and grasslands with scattered trees or tall yuccas.	Potential foraging habitat exists in the project area; however, the habitat is of poor to marginal quality.
Mexican spotted owl *Strix occidentalis lucida*	T	Occur in mixed-conifer forests that have experienced minimal human disturbances.	No suitable habitat in the project area. Presumed absent.

Common Name Scientific Name	Federal Status	Preferred Habitat Description	Potential to Occur in Proposed Project Area
Southwestern willow flycatcher *Empidonax traillii extimus*	E	Prefer thickets, scrubby and brushy areas, open second growth, swamps, and open woodlands near riparian areas.	No suitable habitat in the project area. Presumed absent.

Source: *Threatened and Endangered Species Report for RAMS Comprehensive Environmental Assessment, 2005*
E = Endangered T = Threatened C = Candidate Taxa

The black-tailed prairie dog (*Cynomys ludovicianus*) was formerly listed as a candidate species, but was removed as a candidate from listing in August 2004. In a news release published by the USFWS on August 14, 2004, "...the black-tailed prairie dog is not likely to become an endangered species within the foreseeable future and no longer meets the Endangered Species Act definition of threatened. Therefore, the prairie dog will be removed as a candidate for listing under the Endangered Species Act."

3.4.3.1.1 Species Summary

The following section describes the reasoning for the elimination or further consideration of potential occurrence of Federally listed species within the proposed project area. Key elements used to make this determination include past observations of the species and/or the potential for suitable habitat within the project area.

3.4.3.1.1.1 Species Reviewed but Eliminated from Further Consideration

3.4.3.1.1.1.1 Plants

Todsen's pennyroyal (*Hedeoma todenii*) – The project area occurs outside the elevation range for this species. Todsen's pennyroyal occurs on shallow-to-moderate slopes with a northern exposure. It prefers elevations between 6,200 to 7,400 feet.

3.4.3.1.1.1.2 Animals

Gila trout (*Oncorhyncus gilae gilae*) – The project area does not contain any clear mountain streams with riparian canopies suitable for this species.

Rio Grande silvery minnow (*Hybognathus amarus*) – The project area does not contain any large flowing streams suitable for this species.

Chiricahua leopard frog (*Rana chiricahuensis*) – The project area does not contain permanent water ponds or montane streams.

Bald eagle (*Haliaeetus leucocephalus*) – Although bald eagles can forage or migrate throughout most of New Mexico, their preferred habitat includes large rivers or lakes, which do not occur within or near the proposed project area.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) – The cuckoo breeds in large blocks of riparian habitat, particularly those dominated by cottonwood and willow. They prefer vegetation with a dense understory for nesting. The proposed project area does not contain suitable habitat for this species.

Mexican spotted owl (*Strix occidentalis lucida*) – This species occurs in mature montane forests and woodland, shady wooded canyons, and steep canyons, which are not present within the proposed project area.

Southwestern willow flycatcher (*Empidonax traillii extimus*) – This species is found in vegetation associated with hydrologic conditions appropriate to support an abundant arthropod base. Suitable habitat includes dense patches of vegetation interspersed with small openings, open water, or shorter/sparser vegetation none of which are present at the proposed project area.

3.4.3.1.1.2 Species that Could Potentially Occur within in the Proposed Project Area

3.4.3.1.1.2.1 Animals

Northern Aplomado falcon (*Falco femoralis septentrionalis*) – Historical accounts of the Northern Aplomado falcon have been documented on WSMR. During the 1990s, documented sightings of this species occurred near Rita Site in Otero County and on Route 380 at mile marker 18. A detailed survey over a seven-year period (1997-2003) along seven permanent routes was conducted and detected no Northern Aplomado falcons on WSMR. A study that characterized and predicted suitable Aplomado falcon habitat was conducted in the northern Chihuahuan desert, including the proposed project area. According to the study results, the proposed project area does contain habitat for this species, but is of low suitability.

3.4.3.2 State Listings

The New Mexico Department of Game and Fish maintains a listing of species that occur within the boundaries of the state, which the department finds to be threatened, endangered, or otherwise sensitive to changes in their habitat that may cause the species to become threatened or endangered. The NMNHP is responsible for maintaining and updating a database, which documents the status of all listed species. Table 3.4.3.2-1 lists only the species that were determined to have potential habitat or the potential to occur at the RAMS proposed project area.

Table 3.4.3.2-1 New Mexico Natural Heritage Program (NMNHP) State Listed Species of Potential Occurrence at the RAMS Proposed Project Area, Sierra County, New Mexico

Common Name Scientific Name	State Status	Preferred Habitat
Plants		
Duncan's corycactus *Escobaria duncanii*	E	Cracks in limestone and limy shale in broken terrain in Chihuahuan desert scrub.
Wright fishhook cactus *Mammillaria wrightii*	NR	Gravelly hills, sandy hills, plains, desert grasslands, and pinyon juniper forests.
Night-blooming cereus *Peniocereus greggii var greggii*	E	Gravelly soils on upper to mid bajadas among creosotebush, mesquite, and knife leaf condalia.
Metcalfes's tick-trefoil *Desmodium metcalfei*	R	Rocky slopes, canyons, and ditches in grasslands and oak/pinyon-juniper woodlands.
Rough fiddleleaf *Nama hispidum*	NR	Dry plains and hills.
Todsen's pennyroyal *Hedeoma todsenii*	E	Steep gravelly north- and east-facing hillsides with limestone soils at about 6560 feet in elevation.
Luna County globemallow *Sphaeralcea procera*	R	Sandy arroyos and disturbed areas.
Pink flower flame-flower *Talinum longipes*	S	Calcareus substrates (travertine, limestone, gypsum, limy sandstone), mostly in desert and dry lower mountains.
Branching penstemon *Penstemon ramosus*	S	Rocky canyons and gravelly slopes.
Reptiles		
Texas horned lizard *Phrynosoma cornutum*	NR	Sandy to gravelly soils throughout WSMR where carpenter ants are available as prey.
Fish		
Gila trout *Oncorhynchus gilae gilae*	T	Small, cool, clear mountain streams with riparian canopy; deep pools are necessary during droughts.
White Sands pupfish *Cyprinodon Tularosa*	T	Creeks, pools, springs, brooks, and herbaceous wetlands.

Common Name Scientific Name	State Status	Preferred Habitat
Birds		
Bald eagle *Haliaeetus leucocephalus*	T	Near streams and lakes, some "dry land" areas near the Pecos Valley and the Sandia, Manzo, Capitan, and Sacramento Mountains.
Swainson's hawk *Buteo swainsoni*	NR	Prairies, rangeland, and brush.
Northern Aplomado falcon *Falco femoralis septentrionalis*	E	Arid, brushy prairie.
Common ground-dove *Columbina passerine*	E	Farmlands, dirt and gravel roads, open woodlands, and brush.
Mexican spotted owl *Strix occidentalis lucida*	NR	Occur in mixed-conifer forests that have experienced minimal human disturbances.
Burrowing owl *Athene cunicularia*	NR	Open plains, prairies, and fields.
Chihuahuan raven *Corvus cryptoleucus*	NR	Arid country, rangeland, plains, and desert.
Southwestern willow flycatcher Empidonax traillii extimus	E	Prefer thickets, scrubby and brushy areas, open second growth, swamps, and open woodlands.
Lark bunting *Calamospiza melanocorys*	NR	Plains, prairies, and fields.
Mammals		
Western small-footed myotis *Myotis ciliolabrum*	NR	Desert, badlands, and semi-arid areas.
Fringed myotis *Myotis thysanodes*	NR	Desert, grasslands, and woodlands.
Long-legged myotis *Myotis volans*	NR	Montane coniferous forests, and desert habitat.
Desert bighorn sheep *Ovis canadensis mexicana (endangered populations)*	E	Rough mountain habitat.
Brazilian free-tailed bat *Tadarida brasiliensis*	NR	Foraging habitat in shrublands of WSMR.

Source: *Threatened and Endangered Species Report for RAMS Comprehensive Environmental Assessment, 2005*
E = Endangered T = Threatened R = Review List NR = No Ranking Given by NMNHP

3.4.3.3 Biological Field Survey

Based upon the findings from a recent Threatened and Endangered Species Survey Report, December 2004, the study team found no federal or state protected plant or animal species on the project site. The natural vegetation community of the site is not unique to the project area; in fact, most of the foot slope area, adjacent to and for miles north and south of, the RAMS site is similar in elevation, soil composition, and vegetation type.

3.5 Water Resources

3.5.1 Surface Water

The Tularosa Basin is one of the Central Closed Basins, a cluster of four drainage systems in south central New Mexico, and encompasses approximately 6,500 mi^2. It includes parts of Dona Ana, Sierra, Otero, and Lincoln counties. This basin contains all surface water flows within its boundaries. The upper reaches of Three Rivers and

of the Sacramento River are the main perennial streams in the basin. Although other large drainage systems such as Rhodes Canyon flow to the basin, these only flow after intense precipitation events. Lake Lucero, which is located in the region, is a permanent although highly saline body of water along with other intermittent playas which do intermittently hold precipitation event dependant surface water. Much of the land in the basin is covered with deposits of gypsum, alluvial and eolian sand, gravel, clay, and alkali flats of varying thickness, with basalt lava beds in the northern portion of the valley.

3.5.2 Groundwater

The Tularosa Basin was formed as a structural trough during a period of Middle to Late Cenozoic faulting that exposed Precambrian through Tertiary age igneous and sedimentary rocks along the steep slopes bounding the basin. The rocks underlie Cenozoic fill deposits in the central area of the Basin. Some of the Paleozoic and Mesozoic rocks are known to yield small quantities of water to wells in adjacent areas but are not considered to be major aquifers. Deposition of alluvial fill includes sand, gravel, and clay deposited in alluvial fans along the Basin margins and extensive lake, alluvial, and evaporate deposits within the interior Basin. Large quantities of saline water occur within most of the Tularosa Basin sediments. The Tularosa Basin has significant groundwater resources that provide the majority of the water for use by the people of the region. Much of the deeper groundwater is saline, and not fit for human consumption. The main groundwater quality problems in the basin are high concentrations of naturally occurring dissolved solids and contamination due to leaking petroleum products and nitrates. Two primary sources of groundwater in the lower Tularosa Basin are the Central Basin aquifer, which consists of alluvial, wind, and lake deposits, and alluvial aquifers at the mouths of the major canyons on the valley perimeter. The on-site well at RAMS draws water from the Central Basin aquifer at a depth of 220 feet. The relative depth of the groundwater is 90 to 1,100 feet and both the aquifer and the groundwater are non saline.

Lake deposits with lesser amounts of alluvial and windblown deposits characterize the Central Basin aquifer. Evaporate deposits in the Central Basin may contain large amounts of very saline water. The alluvial aquifers consist of coarse to fine grained sediments in a series of coalescing alluvial fans along the margins of the Basin. The fans were formed from detritus derived from source areas in the bordering mountains. The fan deposits occur in the subsurface as thin veneers overlaying bedrock that thicken toward the deeper portions of the basin where they interlayer with Central Basin deposits. The thickness of alluvial fan deposits ranges from fewer than 100 hundred feet on the higher step-faulted blocks adjacent to the Sacramento escarpment to about 4,000 feet in the San Andres Canyon area northwest of the Dona Ana Range-North Training Areas. At the surface, these deposits are characterized by very coarse, poorly sifted sediments adjacent to the mountain front and by well-sifted, increasingly fine-grained sediments in the deeper portions of the Basin. Abrupt lithologic changes occur at the surface in places where beds of gravel and sand grade horizontally to silt and clay.

The Tularosa Basin is contiguous with northern Hueco Bolson Basin, and groundwater flow between the basins is generally thought to be south from New Mexico to Texas. The Tularosa Basin is the main aquifer in eastern Dona Ana and Sierra and western Lincoln and Otero Counties. The Basin consists of alluvial deposits around its edges. The central part of the Basin consists of very thick lake deposits of gypsum that contribute to its high salinity.

3.6 Floodplains and Wetlands

Executive Order 11988, Floodplain Management, requires all federal agencies to avoid construction within the 100 year floodplain unless no other practical alternative exists. The RAMS site is not positioned in a floodplain. The mountain slopes and foothill areas are characterized by small, ephemeral streams (arroyos), which, during periods of heavy or prolonged storms, discharge runoff to the center portion of the Basin. None of the arroyos that run through the RAMS site discharge into waters of the United States under the current definition. Regulations that apply to waters of the United States do not apply to the RAMS site at this time. There are no perennial surface water sources or designated floodplains or wetlands in the RAMS project area. Storm water runoff follows the arroyo network of drainage.

3.7 Cultural Resources

Cultural resources are prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activities considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Significant cultural resources are evaluated for adverse impacts resulting from a federal undertaking. Significant cultural resources are generally those that are eligible or potentially eligible for inclusion in the National Register of Historic Places (NRHP). Native American or other ethnic groups also may identify traditional resources as significant.

More than 300 archaeological surveys have documented 3,746 sites within WSMR as a whole. In the project vicinity, an archaeological survey of approximately 25 acres associated with the Ten Thousand Slope Range near Rhodes Canyon recorded one archaeological site (WS-246) and 10 isolated artifacts. Three archaeological inventories associated with RAMS were conducted during the early 1980s. The 1982 survey of the 905-acre location of RAMS identified seven Native American sites, a portion of the historic Rhodes Canyon wagon road, a rock cairn and a number of isolated artifacts. Four of these sites (WS-246, 247, 248, and 249) were considered potentially eligible for the National Register of Historical Places (NRHP). The remainder was considered ineligible. Subsurface testing, data recovery excavation, and specialized archaeological studies took place at the four sites in 1982 in order to mitigate impacts resulting from construction of RAMS facilities. These studies resulted in the collection of cultural materials dating from the Paleo-Indian Period (10,000 years or more ago) through the Formative or Ceramic Period (AD 1400). Sites W-247 and W-248 were not expected to be directly impacted by the construction and avoidance of these sites was recommended.

An April 1983 survey of a proposed power line location at RAMS identified one archaeological site (WS-266) and 19 isolated artifacts. All resources were considered ineligible for the NRHP. A May 1983 survey of 800 acres of proposed construction annex adjacent to RAMS documented a portion of site WS-249, excavated in 1982, and recorded an additional 91 isolated artifacts. All of the resources are considered ineligible for the NRHP.

In 2003, an archaeological survey was conducted on 2.95 acres of previously undisturbed desert in the area of proposed storage building construction. The survey identified one archaeological resource to be recommended as ineligible for the NRHP.

A recent Cultural Resources Inventory Survey was conducted in October 2004 0n an approximately 600 acre tract of land adjacent to the RAMS access road. The archeological portion of the survey recorded 20 isolated occurrences of prehistoric material, the largest being a diffuse scatter of 5 flakes. The survey team also recorded one stack of four well-weathered pieces of axe-cut posts, a ring of stones with recent ash, and a large, flat sandstone rock, embedded in the ground, that had been grooved in two places by metal, probably while sharpening something. None of the materials observed are considered to meet the criteria for eligibility for inclusion in the NRHP.

In addition the survey team was also asked to evaluate Building 5018. After checking the Real Property Records, it was determined that Building 5018 was a temporary structure erected in 1982 and did not meet the criteria for inclusion in the NRHP. No other architectural or traditional resources have been identified at the RAMS location.

3.8 Air Quality

3.8.1 Definition of the Resource

Under the CAA, National Ambient Air Quality Standards (NAAQS) enforcement is delegated to state and it allows local agencies to establish Ambient Air Quality Standards (AAQS) and regulations of their own, provided these are at least as stringent as the federal requirements. The airspaces potentially affected by the proposed action are located over WSMR New Mexico. For selected criteria pollutants, the State of New Mexico has established its state ambient air quality standards under 20.2.3 New Mexico Administrative Code (NMAC), which are somewhat more stringent than federal standards for CO, NO_2, and SO_2. In addition New Mexico regulates emissions of total suspended particulates (TSP), hydrogen sulfide (H_2S), and total reduced sulfur, three pollutants for which there are no federal standards. New Mexico has adopted the NAAQS for PM_{10}, O_3, and Pb. Table 3.8.1-1 contains a summary of the federal and New Mexico ambient air quality standards applicable to the region of influence.

Table 3.8.1-1 New Mexico and Federal Air Quality Standards

Air Pollutant	Averaging Time	New Mexico AAQS	Federal (NAAQS)	
			Primary	Secondary
Carbon Monoxide (CO)	8-hour 1-hour	8.7 ppm 13.1 ppm	9 ppm 35 ppm	NA NA
Nitrogen Dioxide (NO_2)	AAM 24-hour	0.05 ppm 0.10 ppm	0.053 ppm	0.53 ppm NA
Sulfur Dioxide (SO_2)	AAM 24-hour 3-hour	0.02 ppm 0.10 ppm	0.030 ppm 0.14 ppm	0.50 ppm
Particulate Matter (PM_{10})	AAM 24-hour	NA NA	50 µg/m³ 150 µg/m³	50 µg/m³ 150 µg/m³
Particulate Matter ($PM_{2.5}$)[a]	AAM 24-hour	NA NA	15 µg/m³ 65 µg/m³	15 µg/m³ 65 µg/m³
Total Suspended Particulates (TSP)	AGM 30-day 7-day 24-hour	60 µg/m³ 90 µg/m³ 110 µg/m³ 150 µg/m³	NA NA NA NA	NA NA NA NA
Hydrogen Sulfide (H_2S)	1-hour[d] 1/2-hour[e] 1/2-hour[f]	0.010 ppm 0.100 ppm 0.030 ppm	NA NA NA	NA NA NA
Total Reduced Sulfur[b]	1-hour[d] 1/2-hour[e] 1/2-hour[f]	0.003 ppm 0.010 ppm 0.003 ppm	NA NA NA	NA NA NA
Ozone (O3)[c]	1-hour 8-hour	NA NA	0.12 ppm 0.08 ppm	0.12 ppm
Lead (Pb) and Lead Compounds	Calendar Quarter	NA NA	1.5 µg/m³	1.5 µg/m³

AAM = Annual Arithmetic Mean
AGM =Annual Geometric Mean
µg/m³ = micrograms per cubic meter
ppm = parts per million
(a) The $PM_{2.5}$ standard (particular matter with less than a 2.5 µm diameter) will be implemented over an extended time frame. Areas will be designated as in attainment or nonattainment of the $PM_{2.5}$ standard as monitoring data becomes available.
(b) Total reduced sulfur does not include H2S.
(c) The 8-hour O_3 standard will eventually replace the 1-hour standard. Meanwhile, the 1-hour O_3 standard will continue to apply to areas not attaining it.
(d) Entire state except for the Pecos-Permian Air Basin (AQCR 155), which includes De Baca, Chaves, Curry, Quay, and Roosevelt Counties.
(e) Within the Pecos-Permian Air Basin.
(f) Within corporate limits of municipalities in the Pecos-Permian air Basin, or within 5 miles of the corporate limits of municipalities having a population greater than 20,000 and within the Pecos-Permian Air Basin.
Sources: Environmental Assessment for the RAMS Modernization Project at Holloman Air Force Base, New Mexico, December 2003

3.8.2 Existing Conditions

A review of the federally published attainment status for New Mexico indicated that all of the counties in the potentially affected area are designated as in attainment, better than national standards, or unclassifiable for O_3, TSP, SO_2, CO, NO_2, and Pb.

The RAMS facility is located in the eastern region of Sierra County in a relatively isolated area on the eastern side of the San Andres Mountains on WSMR in an area classified as being in attainment.

3.9 Noise

The RAMS site is not a high noise level area. There is no specific noise generating range project operations conducted in or around the RAMS site, and there are no public receptors for the few noises generated. Except for employees there is no one to hear what little noise there is.

3.10 Airspace Management

The airspace directly overhead the RAMS facility is restricted and controlled by the military. The RAMS site is not involved in any flight operations, and will not be impacted or cause any impacts to the management of the above airspace.

3.11 Safety

General health and safety protocols for RAMS site personnel are addressed in various Federal, State, Air Force, and Army guidelines, rules and regulations. Applicable safety standard operating procedures apply to all operations. Safety issues addressed in this section include ground, and explosive safety considerations. There are currently no munitions used or stored at the RAMS facility at this time.

3.11.1 Fire and Ground Safety

Daily operations and maintenance activities performed at RAMS are conducted in accordance with applicable AF safety regulations, specific Technical Orders, and other safety standards prescribed by Air Force health and safety requirements.

3.11.2 Explosive Safety

The AF at Holloman AFB controls, maintains, and stores all munitions required for mission performance. Ordnance is handled and stored in accordance with AF explosive safety directives. Munitions maintenance is carried out by trained, qualified personnel using approved technical data. Ample storage facilities exist, and all facilities are fully licensed for the ordnance they store. Unexploded ordnance (UXO) has the potential to exist in certain places throughout WSMR. Holloman Air Force Base is consulted regarding potential UXO hazards and, when possible UXO is identified, explosive ordnance disposal (EOD) is called in to remove or destroy the item(s). Personnel working on RAMS receive UXO training prior to entering the work area, including instruction not to disturb potential UXO.

3.12 Outdoor Recreation

The RAMS site is a controlled area and recreation activities are not permitted due to safety and security requirements.

3.13 Infrastructure

This section provides a description of the RAMS site facility infrastructure which consists of the water supply, wastewater treatment, solid waste, electricity usage, natural gas consumption, system capacities at the RAMS facility, and a permitted paint booth (air emission controls).

3.13.1 Water Resources

The RAMS non-potable water is supplied from a 220 foot well using a 7.5 horsepower pump near the Central Facility. The domestic water system and the fire suppression water system are tied together. There are two 100,000 gallon water storage tanks at the site, one at the north end and one at the south end. They supply sprinkler systems in some of the existing facilities. Bottled water is brought on site for drinking purposes. There are no surface waters at the site.

3.13.2 Waste Water

Sanitary waste from the facilities is sent to an existing sealed holding tank. This tank is emptied at appropriate intervals by a pumper tank truck and waste is hauled to an approved disposal facility.

3.13.3 Solid Waste

Solid refuse is collected and stored in on site dumpsters and is disposed of in a local sanitary landfill or a construction debris landfill located on Holloman AFB and an additional construction debris private landfill is available for use and is located adjacent to Holloman AFB. Construction debris, depending on type, can be disposed of in either of the afore identified construction debris landfills.

3.13.4 Electricity

Electricity lines at RAMS are overhead and are provided by the El Paso Electric Company over government owned lands.

3.13.5 Natural Gas

The RAMS site utilizes Propane (LPG), and it is stored in onsite tanks and replenished as necessary.

3.13.6 Air Filtration

Building 5009 is a paint booth listed in WSMR's Title V Air Permit, possessing a particulate emission control system. The paint booth is used to maintain equipment for the RAMS facility. Paint operations have particulate filters, which are replaced about twice a month. The paint booth operates intermittently and seldom, if ever approaches painting operations that reach the maximum potential of the facility capabilities.

3.13.7 Transportation

The existing RAMS onsite roads are considered sufficient to handle use demands with current and future traffic and site operations. During any reasonably foreseeable RAMS site construction or trenching activity, a very moderate increase in vehicular traffic is expected; however, this activity is considered temporary in nature. There will be general maintenance and minor road improvements for both the roads and parking areas at the RAMS site to meet future needs.

3.14 Hazardous Materials and Waste Management

3.14.1 Hazardous Materials

The target preparation and storage buildings contain designated areas for the storage of hazardous materials. Air Force policy and program requirements associated with hazardous materials as described in AFI 32-7086 provide guidelines for the handling and management of hazardous materials to ensure compliance with federal, state, and local laws.

The avoidance of spills, and their treatment in the event of an accident, are addressed through existing pollution prevention, spill response and air quality regulations. These plans address and specify procedures to be followed should previously undocumented materials be required at the RAMS facility. Those procedures require contractors to identify materials, provide the Material Safety Data Sheet (MSDS), identify quantities, and identify waste streams. This information is sent to 49 Civil Engineering Squadron/Environmental Flight (CES/CEV) where it is evaluated and approved before such materials are brought onsite. Each user of hazardous material is responsible for safe storage and handling of the material. These materials are shipped to each user in compliance with Department of Transportation (DOT) hazardous materials regulations, and all users are responsible for complying with DOT hazardous materials regulations. Releases of hazardous materials above reportable quantities are reported to the USEPA.

3.14.2 Hazardous Waste Management

Hazardous waste generated at the RAMS site is managed by the 46 TG, a tenant on HAFB, under the HAFB Resource Conservation Recovery Act (RCRA) Container Storage Permit. By letter dated 4 Dec 87, the NM Hazardous Waste Bureau agreed that the 46 TG activities are an Air Force operation that should be managed under the HAFB RCRA Permit. Access to and operation of the site is under Air Force authority through agreement between WSMR, HAFB, and the 46 TG. Hazardous wastes are delivered, along controlled access military roads, to the HAFB

<90-day storage area without crossing public highways and disposal is managed through the defense Reutilization Marketing Office (DRMO) on HAFB.

3.15 Socioeconomics

The RAMS site is currently manned on a continuous basis 24 hours per day, seven days a week. The schedule and work force are relatively constant with one or two individuals augmenting the basic workforce periodically. Significant numbers of visitors over appreciable periods of time is rare. Local changes in population, employment, and income in surrounding communities, along with resulting demand for housing and public services is stable. The population in the area is low enough that small projects such as RAMS generate a positive economic effect.

3.16 Environmental Justice

3.16.1 Existing Conditions

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs federal agencies to address environmental and human health conditions in minority and low income communities. The nearest low income populations are as much 40 miles away due to the proximity of the White Sands Missile Range Boundaries (see Figure 1-1, State / Site Area Projection Map).

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4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

Environmental impact is defined as a consequence from modification to the existing environment brought about by the implementation of the proposed action or alternatives. Impacts can be beneficial or adverse, can be a primary result of an action (direct) or a secondary result (indirect), and can be permanent or long lasting (long-term) or temporary and of short duration (short-term). Impacts can vary in degree from a slightly noticeable change to a total change in the environment.

Short-term impacts would occur during and immediately after the construction activities as defined in the proposed action and alternatives. For this project, short-term impacts are defined as those impacts resulting from construction activities, whereas long-term impacts may be both those resulting from the construction and operation of the proposed new facilities.

Significance criteria are presented for each affected resource. These criteria are based on existing regulatory standards, scientific and environmental documentation, and/or professional judgment. Potential impacts for this project are classified at one of four levels: significant, moderate, insignificant (or negligible), and no impact. Significant impacts (as defined in CEQ guidelines 40 CFR 1500-1508) are those effects that are most substantial and, therefore, should receive the greatest attention in the decision-making process. Moderate impacts are those impacts associated with a proposed action that would be noticeable to the public and surrounding community but would fail to meet the criteria used to define significant impacts. Insignificant impacts are those impacts that result in changes to the existing environment that could not be easily detected. No impact actions are those that would not alter the existing environment. In the following discussions, impacts are considered adverse unless identified as beneficial.

Potential environmental consequences to each resource include the following subcategories:

- Significance Criteria: The level of impact that would qualify as significant based on regulatory standards, available scientific documentation, and the best professional judgment of resource specialists.
- Impacts: The level and duration of impacts that would occur as a result of the proposed action and alternatives.
- Mitigation: Mitigation measures that could be applied to avoid or further reduce adverse impacts in addition to standard operating procedures. These measures would be incorporated into the project design.

Cumulative impacts and irreversible and irretrievable commitment of resources are discussed in Section 5.0. Cumulative impacts are those, which result from "the incremental impacts of an action added to other past, present, and reasonably foreseeable actions, regardless of who is responsible for such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (CEQ 1978). Irreversible and irretrievable impacts are permanent reductions or losses of resources that, once lost, cannot be regained.

4.2 Geological Resources and Climate

The proposed construction activities primarily involve soil surface alterations and do not involve any major subsurface excavation, drilling, or blasting.

Proposed Action

Leveling and clearing of the construction areas would disturb surface soil and result in loss of vegetation cover during construction of the new facilities. This relatively small amount of disturbance would constitute moderate impact. Some construction activity would occur on existing disturbed surfaces. Standard BMP would be used during construction and in site design to achieve minimal disturbance and loss of soil. BMP would include the use of Erosion Control Plans (ECP) and Erosion Control Measures (ECM) to reduce soil lost due to erosion and prevention of airborne dust generation. Construction site ECMs such as watering and soil stabilizers would reduce the potential

for short-term wind erosion and dust generation during construction. Soil fill would be permanently stabilized after construction by the parking lot pavement, gravel fill, and building structures. Effects to soils from the proposed action would be mitigated using these measures.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to geological resources would be significantly smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

Alternative Two

This alternative if selected will require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action would disturb an area smaller than the proposed action, but larger than alternative one. The impacts to geological resources would be smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

No Action Alternative

There would be no impact on soils under this alternative because there would be no disturbance of soil crusts or related loss of vegetation.

4.3 Land Use

Proposed Action

There is no significant impact on the land use of the proposed action for the RAMS site new construction. The land use remains the same as currently categorized for the RAMS site, and current airspace usage and restrictions would remain unchanged. The new buildings would expand and modernize the current RAMS site operational capability by adding administrative, storage, and specialty buildings to the present central RAMS location (Fig. 3.3.1-1).

Alternative One

This alternative would cause no significant impact on the land use of the proposed action for the RAMS site new construction. The land use would remain the same as currently categorized for the RAMS site, and current airspace usage and restrictions would remain unchanged.

Alternative Two

This alternative would cause no significant impact on the land use of the proposed action for the RAMS site new construction. The land use would remain the same as currently categorized for the RAMS site, and current airspace usage and restrictions would remain unchanged.

No Action Alternative

There would be no impact on land use under this alternative because no action would take place.

4.4 Biological Resources

Proposed Action

The project area to be disturbed by the construction of the proposed actions consists predominately of native creosotebush scrubland habitat. This small amount of disturbance would constitute an insignificant impact on creosotebush scrubland habitat. The majority of the construction activity would occur on already paved surfaces. Disturbance of land around the construction sites would be short-term due to revegetation efforts using native plant species.

Migratory bird populations (as listed under the MBTA) that range into the area of influence surrounding the proposed project area may be slightly impacted by the proposed construction activities, however these impacts would be minimized by restricting the construction foot prints to as small an area as practicable and by constraining

construction activities, to the extent practicable, to time periods outside of the general breeding season (March through July).

Based upon the findings from the recent December 2004 biological survey, no federally or state protected plant or animal species were found on the 600 acre project site. The RAMS modernization project should not impact any federally or state protected species. There would be no effect on the Northern Aplomado falcon (a federally listed species) that could potentially occur within the proposed project area. Potential foraging habitat exists in the project area for the falcon, but the habitat is of poor to marginal suitability. There have been no recent sightings of the Northern Aplomado falcon during biological surveys on WSMR between the years 1997 – 2003. The natural vegetation community of the site is not unique to the project area; in fact, most of the area adjacent to the RAMS site is similar in elevation, soil composition, and vegetation type.

Alternative One

This alternative if selected will require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to biological resources would be significantly smaller than the proposed action, and would be minimized by restricting the construction foot prints to as small an area as practicable and by constraining construction activities, to the extent practicable, to time periods outside of the general breeding season (March through July).

Alternative Two

This alternative if selected will require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action will disturb an area smaller than the proposed action, but larger than alternative one. The impacts to biological resources would be smaller than the proposed action, and would be minimized by restricting the construction foot prints to as small an area as practicable and by constraining construction activities, to the extent practicable, to time periods outside of the general breeding season (March through July).

No Action Alternative

There would be no change in circumstances for the flora or fauna in the project area because the project would not be done. For this reason, there would be no impact on Biological Resources under the No Action alternative.

4.5 Water Resources

Impacts to surface water and groundwater resulting from the proposed action would be considered significant: 1) If surface water quality was adversely affected; 2) Any underground aquifer were impacted; or 3) Groundwater quality/quantity in local wells diminished.

Proposed Action

There will be limited demand on water for construction dust control, human consumption, and other construction related uses. Construction concrete would be prepared off site and brought to RAMS. RAMS does have non-potable water on site which is pumped from a local 220 foot well. There are no impacts to surface water resources since there is no surface water at the site. A new 100,000 gallon fire suppressant holding tank will be constructed and filled with RAMS site non-potable water. No significant additional personnel would be added and no significant additional water usage is anticipated. The proposed action would impose no additional load on existing water supplies after servicing the new fire suppressant tank. Construction activities associated with the proposed project will involve the use of heavy equipment, thereby leading to the possibility of contaminant release (e.g., fuel, hydraulic fluid, etc.) associated with equipment malfunctions. The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) advises all parties involved in the project to be aware of discharge notification requirements contained in Section 20.6.2.1203 NMAC. Compliance with the notification and response requirements will ensure the protection of ground water quality in the vicinity of the project.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would subsequently place a much smaller demand on available water resources than the proposed action. The impacts to water resources would be significantly smaller than the proposed action. Compliance with the NMED notification and response requirements would ensure the protection of ground water quality in the vicinity of the project.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes, and would subsequently place a smaller demand on available water resources than the proposed action. The impacts to water resources would be smaller than the proposed action. Compliance with the NMED notification and response requirements would ensure the protection of ground water quality in the vicinity of the project.

No Action Alternative

No new impacts to the water resources would occur under this alternative because there would be no change in the use of the three sites.

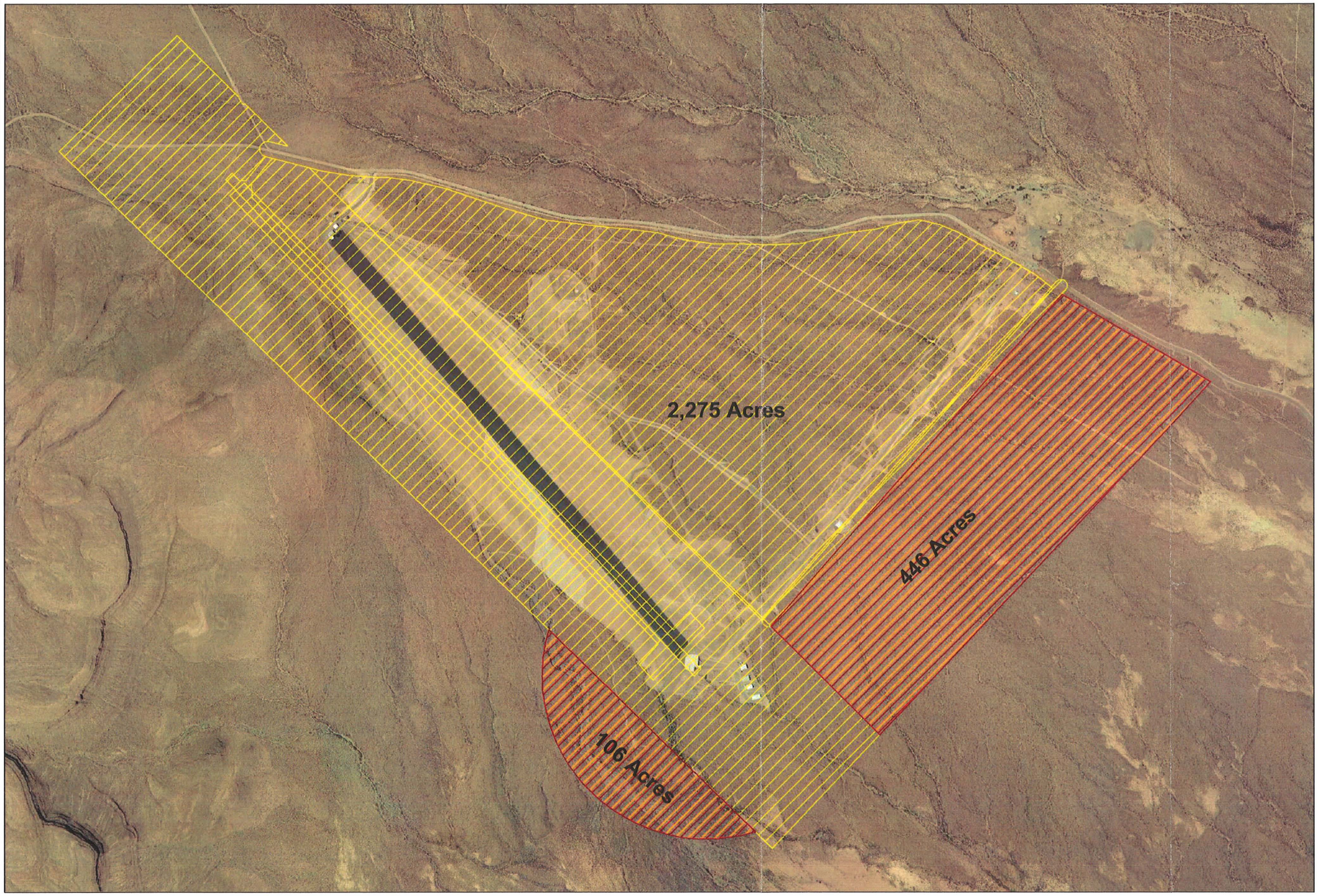
4.6 Floodplains and Wetlands

Proposed Action

There are no floodplains or jurisdictional waters of the U.S. present in the area. Therefore, there would be no environmental impacts to these resources as a result of the proposed action. The site drainage system with arroyos has been identified (see Figure 4.6.1-1, Arroyos Hard and Paved Surfaces on the RAMS Site) to indicate the RAMS site drainage pattern. The United States Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit coverage for storm water discharges from construction projects that will result in the disturbance (or re-disturbance) of on or more acres, including expansions, of total land area. This permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMP) be installed and maintained both during and after construction to prevent, to the extent practicable pollutants (primarily sediment, oil & grease, and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to preconstruction, undisturbed conditions. Permittees may file a Notice of Intent (NOI) by completing an EPA Form 3510-9 or by filing a NOI electronically on the EPA website at http://cdx.epa.gov. All operators are required to obtain NPDES permit coverage for construction projects (owner/developers, general contractors, and other operators). Storm water runoff follows the arroyo network of drainage. Buildings are not to be sited in water runoff areas. Buildings are to be on high ground between runoff areas. Buildings, parking areas, roadways, and water suppression tank sites will be designed to control storm water runoff and detain water flow, if required, to adequately control storm water volume to prevent erosion. The Holloman AFB/WSMR Stormwater Program Managers will determine parameters of a site specific NPDES CGP. Best management practices will be identified in the construction permit or in site specific storm water control plans to identify concerns that might arise as a result of construction activities. Sediment must remain in place on the construction site as much as possible. The contractor must demonstrate that he is aware of potential problems from runoff and he is conducting his activities to minimize potential pollution transport. There are no wetlands, and no areas with vegetation that would indicate intermittent water ponding in the area. All surface water in proximity to RAMS is precipitation event dependent, and rapidly runs off in the many arroyos crossing the vicinity.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to floodplain and wetland resources would be



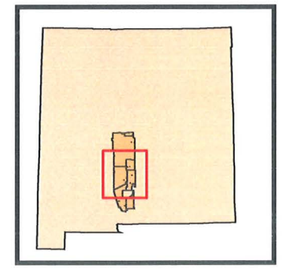


Figure 4.7.1-1
Current and Previously Surveyed Areas

N
W E
S

Surveyed in 2004
Previously Surveyed

0 1,200 2,400
Feet

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significantly smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action will disturb an area smaller than the proposed action, but larger than alternative one. The impacts to floodplain and wetland resources would be smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

No Action Alternative

There would be no impact on floodplains under this alternative because no action would take place.

4.7 Cultural Resources

Impact assessments for cultural resources focus on the level of significance. Under federal law, cultural resources can be affected by an action if they are significant. Significant resources are generally those eligible for inclusion in the NRHP (36 CFR 60.4), or those that are important to traditional groups as outlined in the American Indian Religious Freedom Act, the Native American Graves Protection and Repatriation Act, and EO 13007. A cultural resource that is eligible for inclusion in the NRHP is called a historic property.

To be considered eligible for the NRHP, archaeological resources, architectural resources, and traditional cultural resources must possess integrity and meet one or more of the criteria outlined in 36 CFR 60. NRHP eligible resources are those: A) Associated with events or have made a significant contribution to the broad patterns of our history; B) Associated with lives of persons significant in our past; C) Embody the distinctive characteristics of a type, period, or method of construction, that represent the work of a master, that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or D) Have yielded, or may be likely to yield, information important in prehistory or history.

An action affects a cultural resource eligible for listing on the NRHP when it alters the resource's characteristics, including relevant features of its environment or use, in such a way that it no longer qualifies for inclusion in the NRHP (36 CFR 800.9[b]). Effects can include physical destruction, damage, or alteration of all or part of the property or introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting.

Proposed Action

The project area where the proposed new construction will take place was recently surveyed for cultural resources in October 2004 (see Figure 4.7.1-1, Affected Area Survey October, 2004). In addition, the following proposed new buildings will be constructed on previously disturbed sites and will have no cultural resources impact: 1) Indoor Flip Facility and 2) ATSS Phase One and the Maintenance Facility. The areas to be disturbed within the approximately 600 acre project area will have an insignificant impact on Cultural Resources because nothing of any cultural significance was located on the site.

For the ATSS phase two Spur Range, an additional area one half mile in radius from the Silo Building (5007) was included in the project area. All of this area has been previously surveyed for cultural resources except for a narrow arc beyond the southern edge of the earlier surveyed space. This strip was surveyed in December 2004 for cultural resources. No cultural resources or deposits were found.

The Indoor Target Flip Facility will replace building 5018 and placed on the Building 5018 site which was found to not be historically or culturally significant, and will be dismantled and moved to the Holloman AFB Reclamation Center for Recycling/Reuse. Building 5018 was constructed in 1982 and is not a historically significant structure.

If unrecorded archaeological resources are inadvertently discovered during construction, work would be halted at that location and the White Sands Cultural Resources Manager would be notified in accordance with the WSMR Integrated Cultural Resources Management Plan. Impacts to archaeological resources are not likely under the proposed action.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to cultural resources would be insignificant because nothing of any cultural significance was located on the site. If unrecorded archaeological resources are inadvertently discovered during construction, work would be halted at that location and the White Sands Cultural Resources Manager would be notified in accordance with the WSMR Integrated Cultural Resources Management Plan.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action would disturb an area smaller than the proposed action, but larger than alternative one. The impacts to cultural resources would be insignificant because nothing of any cultural significance was located on the site. If unrecorded archaeological resources are inadvertently discovered during construction, work would be halted at that location and the White Sands Cultural Resources Manager would be notified in accordance with the WSMR Integrated Cultural Resources Management Plan.

No Action Alternative

There would be no impacts to cultural resources under the no action alternative. Facility construction and improvements would not take place. Cultural resources would continue to be managed in compliance with federal law and Army regulation.

4.8 Air Quality

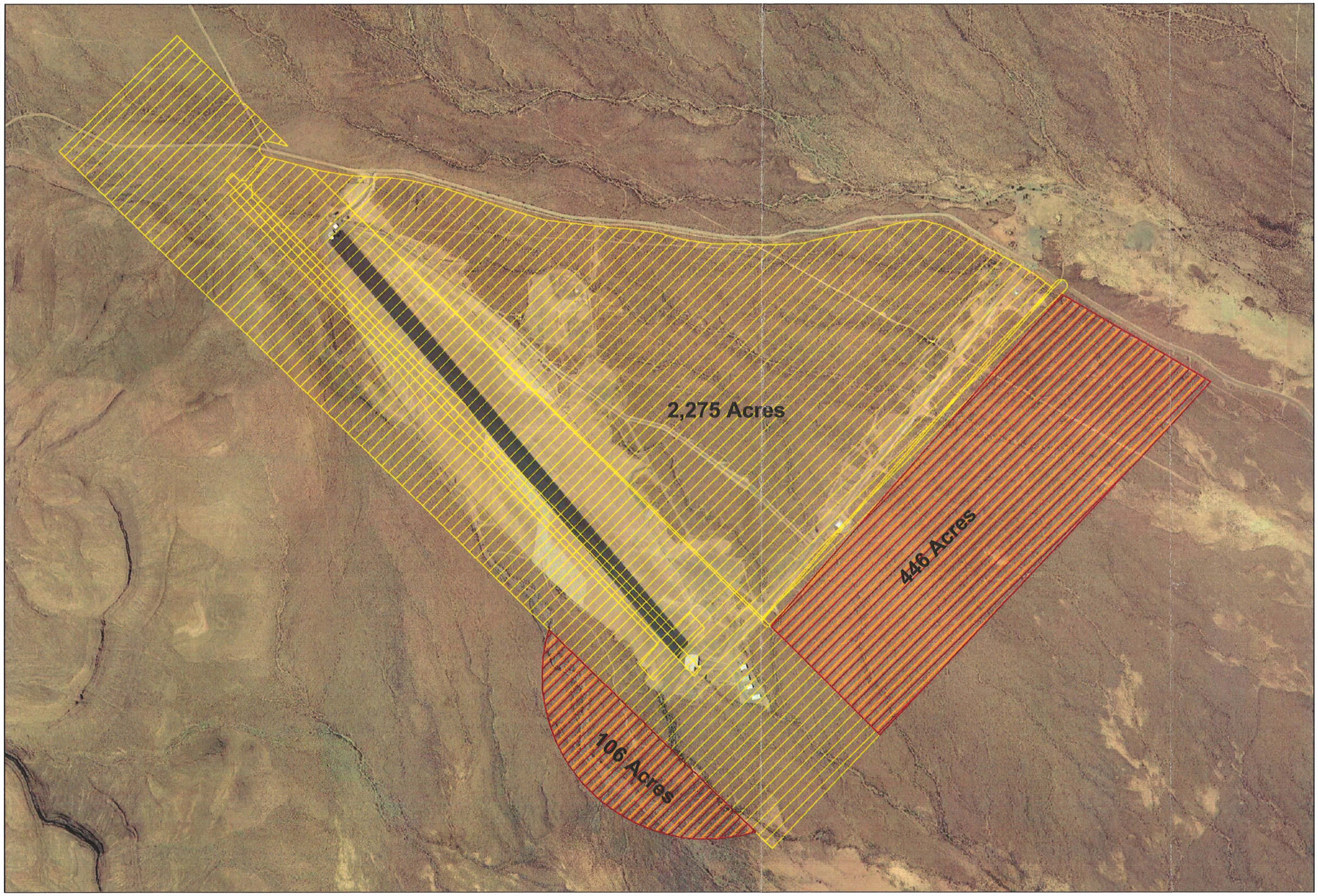
Impacts to air quality would be considered significant if activities under the proposed action result in violation of federal and/or state air quality attainment standards. These impacts are regulated under 20.2.3 NMAC. The project area, located in Sierra County, is currently in attainment with NAAQS as set by the USEPA.

Proposed Action

Air contaminants generated by the new construction activity and the movement of associated heavy equipment during construction of proposed facilities and trenching would include particulate matter, vehicle emissions, and increased wind-borne dust during construction. A memorandum of agreement exists between WSMR and the State of New Mexico to control dust generation except where it will hinder the mission of WSMR and in times of National Emergency. The measures necessary for this proposed action to prevent generation of fugitive dust would require a permit from Sierra County and an ECP. Within the ECP site appropriate ECM will be identified that will provide optimum soil suppression which typically utilize (but are not limited to) water suppression strategies during demolition, construction, and renovation by wetting areas of soil disturbance and debris. In addition to identifying the type of surface treatment an alternative ECM shall be identified in case the original is found to be ineffective. The ECMs will also identify methodology to reduce negative impacts of water usage on site during development activities. The proposed action would produce negligible impacts to air quality during construction. The RAMS access road is paved and would limit entry/exit construction related air emissions. The proposed new paint booth is to be equipped with state of the art air emission controls.

Paint related emissions are anticipated to be no more than the present facility, which will remain and the proposed paint facility will replace work load presently performed in the current paint booth. The new paint facility will be able to handle larger objects for periodic painting. An air permit would be required for the new paint facility prior to construction and would be administratively considered with the WSMR air quality manager. This facility would need to be added to the WSMR Title V permit as a stationary source prior to use. New paint facility emission controls and related projected workload would limit impact on air quality, similar to that currently experienced with the present painting operations.

Compliance with NMED Air Quality Bureau's requirements concerning asbestos removal is required for building removal or demolition. Building 5018 is being removed (disassembled for reuse) and does not contain any known asbestos containing materials (ACMs).



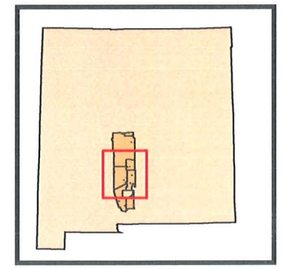


Figure 4.7.1-1
Current and Previously Surveyed Areas

N
W E
S

Surveyed in 2004
Previously Surveyed

0 1,200 2,400
Feet

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Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to air quality would be significantly smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action would disturb an area smaller than the proposed action, but larger than alternative one. The impacts to air quality will be smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action. As in the proposed action, paint related emissions are anticipated to be no more than the present facility, which will remain and the proposed paint facility will replace work load presently performed in the current paint booth. The new paint facility will be able to handle larger objects for periodic painting. An air permit would be required for the new paint facility prior to construction and would be administratively considered with the WSMR air quality manager. This facility would need to be added to the WSMR Title V permit as a stationary source prior to use. New paint facility emission controls and related projected workload would limit impact on air quality, similar to that currently experienced with the present painting operations.

No Action Alternative

There would be no change in air quality in the project area because the project would not proceed and no construction would occur.

4.9 Noise

Proposed Action

There is no significant impact for noise at the RAMS site. The additional new facilities would not generate any appreciable level of noise. Any noise generated during construction would be temporary and cease once completed. Post construction noise levels are anticipated to remain the same as the current operational noise levels, which are insignificant.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would not generate any appreciable level of noise. Any noise generated during construction would be temporary and cease once completed. Post construction noise levels are anticipated to remain the same as the current operational noise levels, which are insignificant.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but would not generate any appreciable level of noise. Any noise generated during construction would be temporary and cease once completed. Post construction noise levels are anticipated to remain the same as the current operational noise levels, which are insignificant.

No Action Alternative

There would be no change in noise in the project area because the project would not proceed and no construction would occur.

4.10 Airspace Management

Proposed Action

There is no significant impact on airspace management. The proposed action will not add or impact over flight of aircraft using this range.

Alternative One

There is no significant impact on airspace management. The proposed action will not add or impact over flight of aircraft using this range.

Alternative Two

There is no significant impact on airspace management. The proposed action will not add or impact over flight of aircraft using this range.

No Action Alternative

There would be no change to air space management in the project area because the project would not proceed and no construction would occur.

4.11 Safety

Proposed Action

All personnel shall follow OSHA, Air Force, and Army regulations to ensure safety on the work site. Possible health and safety concerns for workers in the RAMS area include: 1) Contact with UXO, 2) Venomous snakes and insects, and 3) Thorn bushes. All personnel would have received UXO training before being allowed entry into the work area. There would be no impacts related to human health and safety from the proposed action area during construction and anticipated site use thereafter.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. There would be no impacts related to human health and safety from the proposed action area during construction and anticipated site use thereafter. Appropriate safety measures would be taken as described in the proposed action.

Alternative Two

This alternative if selected will require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. There would be no impacts related to human health and safety from the proposed action area during construction and anticipated site use thereafter. Appropriate safety measures would be taken as described in the proposed action.

No Action Alternative

There would be no change in circumstances for human health and safety in the project area because the project would not proceed. Therefore, there would be no impact on human health and safety under the no action alternative.

4.12 Outdoor Recreation

Proposed Action

There is no significant outdoor recreation impact. Since the proposed action will be within the current restricted area, access to the RAMS site will be controlled at the entry location for security and safety requirements. Recreational use is not permitted.

Alternative One

There is no significant outdoor recreation impact. Since the proposed action will be within the current restricted area, access to the RAMS site will be controlled at the entry location for security and safety requirements. Recreational use is not permitted.

Alternative Two

There is no significant outdoor recreation impact. Since the proposed action will be within the current restricted area, access to the RAMS site will be controlled at the entry location for security and safety requirements. Recreational use is not permitted.

No Action Alternative

There would be no change in outdoor recreation in the project area because the project would not proceed and no construction would occur.

4.13 Infrastructure

Proposed Action

A small increase in vehicular traffic is expected to occur during building construction and utility trenching. This impact would be temporary and would not exceed the capacity of the existing roadway. Heavy machinery required for site preparation and trenching would be transported by trailer or flatbed to reduce impacts to area roads. It is recommended where possible that trenching and burying cable and pipeline be done concurrently. In addition, it is recommended that the least amount of trench possible be left open overnight and to provide escape ramps for trapped wildlife. There will be an increase in the infrastructure with the addition of new roads and parking areas.

The proposed action calls for the removal of building 5018, which will be disassembled and moved to the Holloman AFB Reclamation area for recycle/reuse.

All water for heavy use construction purposes would be brought on site. Although there is water available on site, it is primarily reserved for utility and firefighting purposes and only use of small quantities may be allowed. Thus the proposed construction of new facilities would not have any appreciable affect on the limited quantity of water available on site. Operation of the proposed new facilities will not result in any major increase in manpower nor water utility use at the site.

Utility upgrades and connections would occur adjacent to current underground utility services for electrical, communications, and water. (See Figure 4.13.1-1, Utility Easements for RAMS). New utility services will result in a minor impact for the new facilities. Utilities are be located in previously disturbed areas and will disturb only minor soil conditions when routed to the new facilities.

There would be negligible impacts on regional infrastructure.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to infrastructure resources would be significantly smaller than the proposed action, and will be mitigated by the construction measures as described in the proposed action.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action would disturb an area smaller than the proposed action, but larger than alternative one. The impacts to infrastructure resources would be smaller than the proposed action, and would be mitigated by the construction measures as described in the proposed action.

No Action Alternative

There would be no change in infrastructure in the project area because the project would not proceed.

4.14 Hazardous Materials and Waste Management

Hazardous material/waste impact would be significant if the environment or construction workers were exposed to potentially harmful concentrations of hazardous or regulated materials, wastes, or substances during an activity. Impacts could result if non-hazardous/regulated and hazardous substances were collected, stored, and/or disposed of improperly. The implementation of a spill prevention and response plan will minimize the potential for an accidental release.

Proposed Action

The RAMS Site new buildings will contain designated areas for the storage of hazardous materials. Air Force policy and program requirements associated with hazardous materials as described in AFI 32-7086 provide guidelines for the handling and management of hazardous materials to ensure compliance with federal, state, and local laws. Hazardous wastes generated in these facilities will be managed by Holloman AFB. Hazardous waste for the RAMS site is managed by the 46th Test Group under the Holloman AFB RCRA Permit and formal agreement between WSMR, Holloman AFB, and the NMED. The specific impacts will be insignificant. Materials and quantities are unknown at this time. The avoidance of spills, and their treatment in the event of an accident, is addressed through existing pollution prevention, spill response, and air quality regulations. These plans address and specify procedures to be followed should previously undocumented materials be required at the RAMS facility. Those procedures require contractors to identify materials, provide the Material Safety Data Sheet (MSDS), identify quantities, and identify waste streams. This information is sent to 49 Civil Engineering Squadron/Environmental Flight (CES/CEV) where it is evaluated and approved before such materials are brought onsite. Each user of hazardous material is responsible for safe storage and handling of the material. These materials are shipped to each user in compliance with Department of Transportation (DOT) hazardous materials regulations, and all users are responsible for complying with DOT hazardous materials regulations. Releases of hazardous materials above reportable quantities are reported to the USEPA.

No maintenance of construction equipment would be conducted on-site, minimizing the potential for spills or direct contact with petroleum, oil, or lubricant. Equipment and vehicles parked overnight, or left for lengthy periods on-site, would be fitted with drip pans. There would be negligible impacts related to hazardous and toxic materials/wastes from the RAMS area construction. All material will be handled per appropriate guidance.

Alternative One

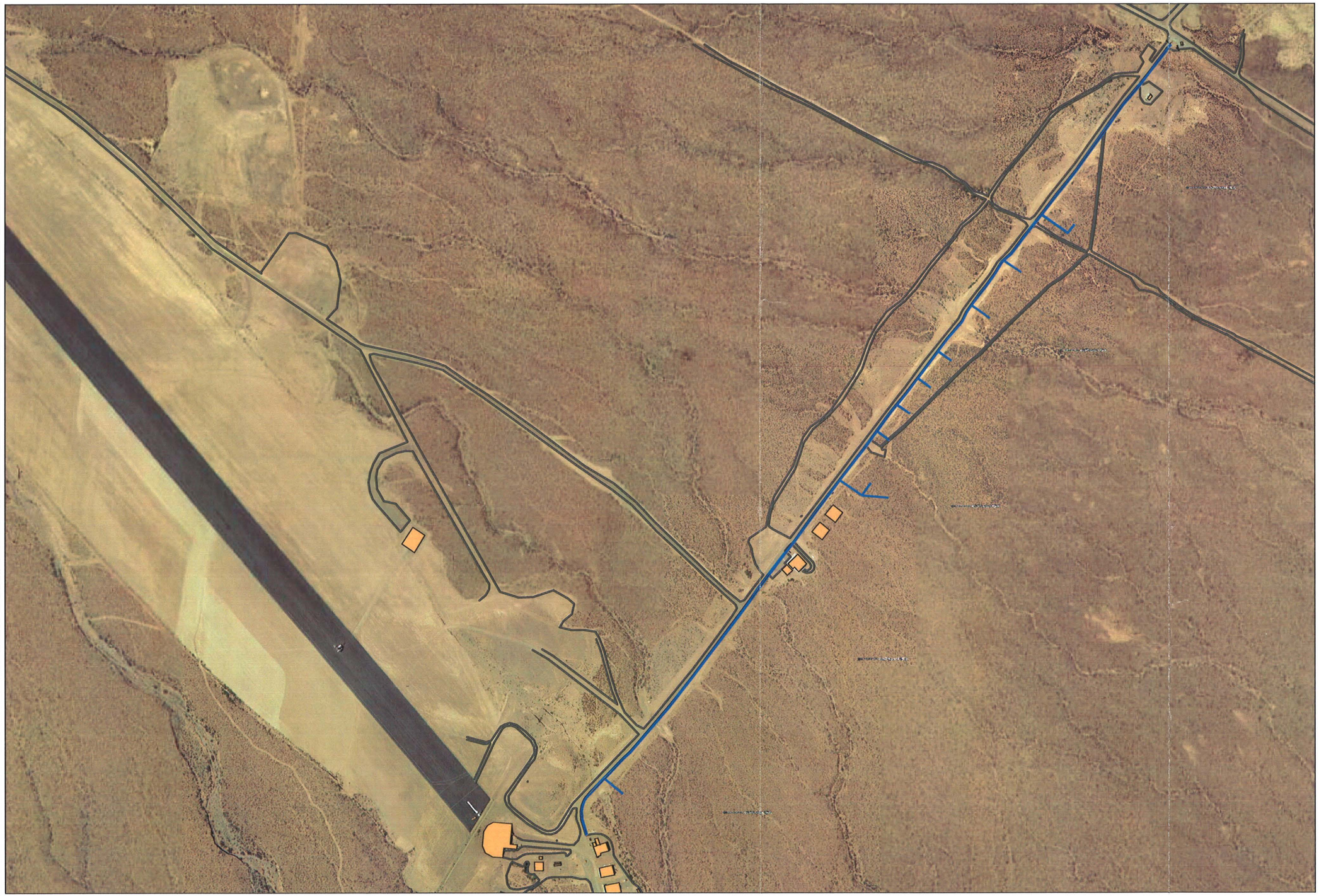
This alternative if selected would require a much smaller footprint for construction purposes, and would disturb a significantly smaller area than the proposed action. The impacts to hazardous materials and waste management resources would be significantly smaller than the proposed action, and will be mitigated by the handling guidelines as described in the proposed action.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, but larger than alternative one. This action would disturb an area smaller than the proposed action, but larger than alternative one. The impacts to hazardous materials and waste management resources would be significantly smaller than the proposed action, and will be mitigated by the handling guidelines as described in the proposed action.

No Action Alternative

There would be no change in circumstances for hazardous and toxic materials or wastes in the project area because the project would not proceed. For this reason, there would be no impact.



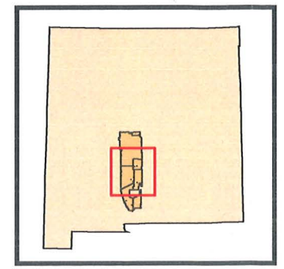


Figure 4.13.1-1
Utility Easements

N
W E
S

Current Buildings
Utilities

0 590 1,180
Feet

Environmental Assessment

FINAL

APRIL 2005

J.M. WALLER ASSOCIATES
MANAGING THE VISION

4.15 Socioeconomics

Proposed Action

There is no significant impact on population, employment, or income in the surrounding local communities. Since the proposed action new construction will not increase site manning, the surrounding community will not benefit on a long term basis. There may be a short term beneficial impact as the new construction may generate short term employment for the proposed construction activities.

Alternative One

This alternative if selected would require a much smaller footprint for construction purposes, and would have an impact significantly smaller than the proposed action. Since the proposed action new construction will not increase site manning, the surrounding community will not benefit on a long term basis.

Alternative Two

This alternative if selected would require a smaller footprint for construction purposes than the proposed action, and would have an economic impact smaller than the proposed action but larger than alternative one Since the proposed action new construction will not increase site manning, the surrounding community will not benefit on a long term basis. There may be a short term beneficial impact as the new construction may generate short term employment for the proposed construction activities.

No Action Alternative

There would be no impact on socioeconomics because the project would not proceed and no actions will take place.

4.16 Environmental Justice

Proposed Action

There is no significant impact on minority or low income nearby populations for the proposed action.

Alternative One

There is no significant impact on minority or low income nearby populations for the proposed action.

Alternative Two

There is no significant impact on minority or low income nearby populations for the proposed action.

No Action Alternative

There would be no impact on environmental justice because the project would not proceed and no actions will take place.

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5.0 SUMMARY OF CUMULATIVE CONSEQUENCES

5.1 Cumulative Effects

Cumulative impacts are those environmental impacts that result from the incremental effects of the proposed action when compounded by other past, present, or reasonably foreseeable future actions (40 CFR 1508.7)

No additional foreseeable actions by federal, state, tribal, or local officials are known to be planned for the project area. Project facility site locations, parking areas, roadway, and utility installation impacts will be of minor significance to the project area. Planned facilities with associated parking areas, roadways, and fire suppression tanks will increase the impermeable surface area at the RAMS site. The effect of this will be to increase storm water runoff volume and velocity. All construction, facility sites, and associated infrastructure will mitigate storm water runoff with design features to control storm water volume and velocity to mitigate possible storm water runoff erosion.

Facility sites with parking areas, roadways, and fire suppression tanks would disturb the creosote bush scrubland habitat in the long term in the project area. This disturbance would be minor to the creosote bush scrubland habitat, as this natural vegetation community is not unique to the project area and is surrounded by thousands of acres of similar habitat. A finding of no effect to threatened and endangered species was made for the project area because of the lack of any evidence that there were any listed species in the project area.

5.2 Irreversible and Irretrievable Commitment of Resources

For the proposed action, irreversible or irretrievable commitments of resources would include: a minimal amount of soil lost through either wind and water erosion during construction activities; loss of RAMS site operational productivity during new building construction activity; a small loss of native vegetation; energy use for site construction activities; and a moderate level of increased noise generated during construction activities.

Under the no action alternative, no irreversible or irretrievable commitments of resources would occur. Therefore, there would be no impacts on this resource.

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6.0 LIST OF PREPARERS

Merrill, Mark	JM Waller Associates	Program Manager
Clarkson, Robert	JM Waller Associates	Senior Environmental Scientist
Moyer, Robert, EIT	JM Waller Associates	Environmental Engineer
Jeter, Julie	JM Waller Associates	Wildlife Biologist
Dunning, Daniel	JM Waller Associates	Environmental Scientist
Scott, Terry;	JM Waller Associates	Environmental Scientist
Cook, William	JM Waller Associates	Engineering Specialist
Schneider, Mike	JM Waller Associates	GIS Technician
Johnson, Stephen	JM Waller Associates	GIS Technician
Stutsman, Ellen	JM Waller Associates	Technical Editor
Correa, Alba	JM Waller Associates	Technical Editor

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7.0 PERSONS AND AGENCIES CONTACTED

The following agencies were contacted at the onset of this project.

Lisa Santana, Ph.D.
Microbiologist / Toxicologist
Environment and Safety Directorate
White Sands Missile Range, NM 88002

David Andersen, Ph. D.
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Environment and Safety Directorate
White Sands Missile Range, NM 88002

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Brian Smith, Capt. USAF
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8.0 REFERENCES

1. Andersen, David, PhD; Land Manager; White Sands Missile Range, New Mexico. 2004. Personal communication with Bob Clarkson and Daniel Dunning, J.M. Waller Associates, Inc. San Antonio, Texas. October 21.
2. Andreoli, Robert; Environmental Engineer; White Sands Missile Range, New Mexico. 2004. Personal communication with Bob Clarkson and Daniel Dunning, J.M. Waller Associates, Inc. San Antonio, Texas. October 21.
3. Counsel on Environmental Quality's Implementing Regulations (40 CFR 1500 through 1508) for preparing EISs.
4. *Cultural Resources Inventory Survey for the National Radar Test Facility/RAMS Comprehensive Development Project,* White Sands Missile Range, New Mexico, Gulf South Research Corporation, December 2004.
5. *Cultural Resources Inventory Survey for the National Radar Test Facility/RAMS Modernization Project,* White Sands Missile Range, New Mexico, SWCA Environmental Consultants, December 2003.
6. *Dona Ana County Erosion Control Regulations,* Dona Ana County, New Mexico, 19 January 2001.
7. *Environmental Assessment Inactivation of the 20th Fighter Squadron (German Air Force),* Holloman Air Force Base, New Mexico, Science Applications International Corporation, June 2004.
8. *Environmental Assessment for the RAMS Modernization Project at Holloman Air Force Base, New Mexico.* Science Applications International Corporation, December 2003.
9. *Environmental Assessment of RATSCAT Advanced Measurement Site RAMS.* White Sands Missile Range, New Mexico, Physical Science Laboratory, New Mexico State University, September 1982.
10. *Final White Sands Missile Range-Wide Environmental Impact Statement,* White Sands Missile Range, New Mexico, Directorate of Environment and Safety, Environmental Services Division, January 1998.
11. Gomolak, Andrew (JR); Real Property Officer; Holloman AFB, New Mexico. 2004. Personal communication with Bob Clarkson and Daniel Dunning, J.M. Waller Associates, Inc. San Antonio, Texas. October 20.
12. *Holloman Air Force Base AQCR 702 (NMAC 2.72) Permit Application for RAMS*, Holloman Air Force Base, New Mexico, Radian Corporation, December 1995.
13. *Integrated Natural Resource Management Plan White Sands Missile Range,* White Sands Missile Range, New Mexico, New Mexico Heritage Program, University of New Mexico and Environment and Safety Directorate, November 2001.
14. *Memorandum of Agreement Between Commander, White Sands Missile Range and Cabinet Secretary, New Mexico Environment Department*, White Sands Missile Range, New Mexico, 9 January 2001.
15. New Mexico Resource Geographic Information System Program, University of New Mexico, http://rgis.unm.edu, accessed 8 November 2004.

16. Santana, Lisa, PhD; Microbiologist/Toxicologist; White Sands Missile Range, New Mexico. 2004. Personal communication with Bob Clarkson and Daniel Dunning, J.M. Waller Associates, Inc. San Antonio, Texas. October 18.

17. Smith, Brian; Captain, USAF 46th Test Group; Holloman Air Force Base, New Mexico. 2004. Personal communication with Bob Clarkson and Daniel Dunning, J.M. Waller Associates, Inc. San Antonio, Texas. October 19.

18. *Threatened and Endangered Species Survey Report for RAMS Comprehensive environmental Assessment*, White Sands Missile Range, New Mexico, Gulf South Research Corporation, December 2004.

19. *US 70 / White Sands Missile Range Interchange Biological Survey,* Dona Ana County, New Mexico, Marron and Associates, Inc., October 2002.

20. *US 70/ White Sands Missile Range Interchange Improvement Project Environmental Assessment,* White Sands Missile Range, New Mexico, US Department of Transportation, Federal Highway Administration, New Mexico division, and New Mexico State Highway and Transportation Department, January 2003.

18. White Sands Missile Range Integrated Cultural Resources Management Plan, White Sands Missile Range New Mexico, Robert J. Burton, September 2001.

APPENDIX A

INTERAGENCY INTERGOVERNMENTAL COORDINATION ENVIRONMENTAL PLANNING CORRESPONDENCE

APPENDIX A INTERAGENCY INTERGOVERNMENTAL COORDINATION ENVIRONMENTAL PLANNING CORRESPONDENCE

IICEP correspondence was mailed to the agencies listed below. Responses to the correspondence were considered in the development of the environmental assessment documents.

U.S. SENATORS FOR NEW MEXICO

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328 Hart Senate Office Building
Washington, DC 20510

The Honorable Jeff Bingaman (D-NM)
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Washington, DC 20510

U.S. REPRESENTATIVES FOR NM

The Honorable Heather Wilson (R-NM)
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Albuquerque, NM 87102

The Honorable Steven Pearce
400 North Telshor
Suite E
Las Cruces, NM 88011

The Honorable Tom Udall (D-NM)
811 St. Michael's Drive
Suite 104
Santa Fe, NM 87505

NEW MEXICO GOVERNOR

Governor Bill Richardson
Office of the Governor
State Capitol
Room 400
Santa Fe, NM 87501

FEDERAL REGULATORS

Mr. James Harris, Regional Administrator
U.S. Environmental Protection Agency
Region VI (6PD-N)
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Ms. Joy Nicholopoulos
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
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Albuquerque, NM 87113

NEW MEXICO REGULATORS

Mr. Gedi Cibas, Management Analyst
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New Mexico Environment Department
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Santa Fe, NM 87502-6110

Mr. Ned Farquhar
NM SPOC
Energy and Environmental Policy Advisor
State Capitol Building
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Santa Fe, NM 87501

Ms. Katherine Slick
State Historic Preservation Officer
New Mexico Historic Preservation Division
228 East Palace Avenue
Santa Fe, NM 87503

Ms. Lisa Kirkpatrick
Conservation Services Division
New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87504

Mr. Robert Sivinski
Forestry and Resource Conversation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 S. St. Francis Drive
Santa Fe, NM 87505

INTERESTED FEDERAL AGENCIES

Ms. Mara Weisenberger
San Andres National Wildlife Refuge
U.S. Fish and Wildlife Service
Las Cruces, NM 88004

Mr. Cliff Spencer, Superintendent
White Sands National Monument
U.S. National Park Service
P.O. Box 1086
Holloman AFB, NM 88330

Mr. Ed Roberson
Las Cruces Field Office
U.S. Bureau of Land Management
1800 Marquess Street
Las Cruces, NM 88005

Mr. Jose M. Martinez, Forest Supervisor
Lincoln National Forest
1101 New York Avenue
Alamogordo, NM 88310

Mr. Ken Anderson, Acting Forest Supervisor
Cibola National Forest
2113 Osuna Road NE, Suite A
Albuquerque, NM 87113

Mr. Harv Forgren, Regional Forester
Southwestern Region (3)
USDA Forest Service
333 Broadway SE
Albuquerque, NM 87102

Ms. Donna McFadden
Mescalero Apache Tribe
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Dr. Adolph Greenberg
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Governor Arturo Senclair
Ysleta del Sur Pueblo
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El Paso, TX 79907

Mr. John Barrera
ATZC-DOE-C
B624, Pleasonton Road
Fort Bliss, TX 79916-6812

INTERESTED LOCAL AGENCIES

LAS CRUCES
The Honorable William "Bill" Mattiace
Mayor of Las Cruces
P.O.Box 20000
Las Cruces, NM 88004

Dona Ana County Government
180 W. Amador
Las Cruces, NM 88001

ALAMAGORDO
The Honorable Donald Carroll
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Alamogordo, NM 88310

OTERO COUNTY
Mike Nivison (District 3)
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Cloudcroft, NM 88317

SOCORRO
The Honorable Ravi Bhasker
Mayor of Socorro
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Socorro, NM 87801

CARRIZOZO
The Honorable Manny Hernandez
Mayor of Carrizozo
P.O. Box 247
Carrizozo, NM 88301

LINCOLN COUNTY
Lincoln County Chairman Office
300 Central Avenue
Carrizozo, NM 88301

TRUTH OR CONSEQUENCES
The Honorable Jimmy Rainey
Mayor of Truth or Consequences
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Truth or Consequences, NM 87901

SIERRA COUNTY
James M. Coslin (Chairman)
100 North Dale Street
Truth or Consequences, NM 87901
(505) 894-2840

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APPENDIX B
RESPONSES TO IICEP COORDINATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE

05 MAR 22 07 Pb

San Andres National Wildlife Refuge
P.O. Box 756
Las Cruces, NM 88004
(505) 382-5047

15 March 2005

Department of the Army
U.S. Army Garrison White Sands
100 Headquarters Avenue
Attn: IMSW-WSM-ES-C (Bldg. 163)
White Sands Missile Range, NM 88002-5000

Dear Sirs,

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FNSI) for the Radar Cross Section Accurate Measurement Site (RAMS) at White Sands Missile Range (WSMR), New Mexico. The U. S. Fish and Wildlife Service would like to provide the following comments for the EA:

1. Page 13, Figure 3.3-1 Land Use: The San Andres National Wildlife Refuge (Refuge) boundaries were omitted from this figure. The WSMR Environmental Stewardship Division has current GIS layers for the Refuge. We would request that future maps include the boundaries of the Refuge.

2. Page 21, Table 3.4.3.2-1 New Mexico Natural Heritage Program (NMNHP) State Listed Species of Potential Occurrence at the RAMS Proposed Project Area, Sierra County, New Mexico: We recommend that desert bighorn sheep (Ovis canadensis mexicana) be added to the table. This species is listed as state endangered.

3. Page 33, Section 4.9 Noise: There is no discussion about noise levels with respect to post-construction operations. We recommend that this issue be addressed briefly.

4. There is no discussion about the effects on air space regarding the proposed expansion to the RAMS site. With the understanding of the sensitive nature of the RAMS site, we currently do not fly directly over the site during resource management activities; rather maintain a buffer around the site. The San Andres Mountains contain important habitat critical to the management of large, native mammals, including the state endangered desert bighorn sheep. We request that we continue to be permitted to persist with management activities under the current guidance.

Please feel free to contact Kevin Cobble, Refuge Manager, or myself at 505.382.5047 with any questions or comments.

Sincerely,

Mara Weisenberger

Mara Weisenberger
Wildlife Biologist

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

March 3, 2005

Department of the Army
U.S. Army Garrison White Sands
100 Headquarters Ave.
Attn: IMSW-WSM-ES-C (Bldg. 163)
White Sands Missile Range, NM 88002-5000

Dear Sirs:

RE: FINAL DRAFT ENVIRONMENTAL ASSESSMENT FOR THE RADAR CROSS-SECTION ADVANCED MEASUREMENT SITE COMPREHENSIVE PROJECT AT WSMR (JANUARY 2005)

This transmits New Mexico Environment Department (NMED) staff comments concerning the above-referenced Final Draft Environmental Assessment (FDEA).

Surface Water Quality

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. It appears that the disturbance resulting from construction of the group of projects addressed in this FDEA meets the definition of a "common plan of development or sale" that in total exceeds one acre (including staging areas, etc.). Therefore, it appears that the entire project will require appropriate NPDES permit coverage prior to beginning construction (small, one - five acre, construction projects may be able to qualify for a waiver in lieu of permit coverage - see Appendix D).

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization

Reid
3/7/2005
ES
ORIG - IMSW-C

measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.C.1)

You should also be aware that EPA requires that all "operators" (see Appendix A) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications (probably the USAF, WSMR, and/or the US Army Corps of Engineers in this case), the general contractor(s) who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective July 1, 2003 (see **Federal Register/Vol. 68, No. 126/Tuesday, July 1, 2003** pg. 39087). The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at: http://cfpub.epa.gov/npdes/stormwater/cgp.cfm

Ground Water Quality

The proposed project at WSMR will involve the construction of multiple structures: an indoor target flip facility; an advanced target suspension system; a paint facility; three administration complexes (each consisting of an administrative building and two storage buildings); a fire suppression tank; six target storage buildings; a maintenance facility; a supply facility; and an equipment shelter building.

The FDEA indicates that all domestic waste generated at the proposed facilities will be routed to sealed holding tanks, and that the holding tanks will be emptied as necessary by a pumper truck. Domestic waste will be disposed at an approved disposal facility. Any hazardous wastes that are generated will be delivered to the Holloman Air Force Base (HAFB) 90-day hazardous waste storage site, with final disposal managed by the Defense Reutilization Marketing Office at HAFB. Hazardous waste management at HAFB is regulated by the HAFB Resource Conservation and Recovery Act (RCRA) Part B disposal permit.

Based on the proposed domestic and hazardous waste management practices (i.e., practices involving containment without on-site disposal of wastewater) and depth to ground water at the location of the proposed facilities (anticipated to be greater than 100 feet given that a 220-foot deep well will be used to provide non-potable water for the project facilities), it appears that a ground water discharge permit pursuant to the New Mexico Water Quality Control Commission Regulations will not be required for the proposed project.

Construction activities associated with the proposed project will involve the use of heavy equipment, thereby leading to the possibility of contaminant releases (e.g., fuel, hydraulic fluid, etc.) associated with equipment malfunctions. The Department's Ground Water Quality Bureau (GWQB) advises all parties involved in the project to be aware of discharge notification requirements contained in Section 20.6.2.1203 NMAC. Compliance with the notification and

response requirements will ensure the protection of ground water quality in the vicinity of the project.

Hazardous Waste

Section 3.14.2 (Hazardous Waste Management) states that the hazardous wastes generated at the RAMS site are profiled by the 49 CES/CEV Hazardous Waste Program Manager and are included in the Holloman Air Force Base (HAFB) Part B, Resource Conservation and Recovery Act (RCRA) disposal permit. Please explain why the hazardous wastes generated on White Sands Missile Range's (WSMR) property are not going to be handled through WSMR's RCRA permit.

The FDEA must provide additional information regarding HAFB's RCRA permit to confirm that accepting hazardous wastes generated off-site is in the confines of their RCRA permit.

In addition, the last sentence in Section 3.14.2 (Hazardous Waste Management) states that hazardous wastes delivered to the HAFB 90-days storage site and disposal is managed through the Defense Reutilization Marketing Office (DRMO) at HAFB. Please change "90-days" to "less than 90-days" or "< 90-days."

Air Quality

Compliance with NMED Air Quality Bureau's requirements concerning asbestos removal is also required if Building 5018 is demolished. In addition to packaging and disposal of asbestos, the requirements for asbestos demolition and removal, if any, must be met. Advance notification to NMED is required. For additional information regarding these requirements, please contact Royce Wyrick or Ron Duffy in Santa Fe at (505) 827-1494. Additional information regarding asbestos can be found on our web site at http://www.nmenv.state.nm.us/aqb/asbestos/asbestos.html.

We appreciate the opportunity to comment on this project.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 2028ER

GOVERNOR
Bill Richardson

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
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Phone: (505) 476-8008
Fax: (505) 476-8124

DIRECTOR AND SECRETARY
TO THE COMMISSION
Bruce C. Thompson

Visit our website at www.wildlife.state.nm.us
For basic information or to order free publications: 1-800-862-9310.

STATE GAME COMMISSION
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Albuquerque, NM

Alfredo Montoya, Vice-Chairman
Alcalde, NM

David Henderson
Santa Fe, NM

H.M. "Dutch" Salmon
Silver City, NM

Peter Pino
Zia Pueblo, NM

Dr. Tom Arvas
Albuquerque, NM

Leo Sims
Hobbs, NM

March 3, 2005

Thomas A. Ladd, Director, Environment & Safety Directorate
Department of the Army
US Army Garrison White Sands
100 Headquarters Ave.
Attn: IMSW-WSM-ES-C (Bldg. 163)
White Sands Missile Range, NM 88002-5000

Re: Radar Cross Section Accurate Measurement Site (RAMS) at WSMR, NM.
NMGF No. 9895

Dear Mr. Ladd,

In response to your letter dated January 31, 2005, regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats. For your information, we have enclosed a list of sensitive, threatened and endangered species that occur in Dona Ana County.

For more information on listed and other species of concern, contact the following sources:

1. Species Accounts: http://fwie.fw.vt.edu/states/nm.htm
2. Species Searches: http://nmnhp.unm.edu/bisonm/bisonquery.php
3. New Mexico Wildlife of Concern by Counties List: http://www.wildlife.state.nm.us/conservation/share_with_wildlife/documents/speciesofconcern.pdf
4. Habitat Handbook Project Guidelines: http://wildlife.state.nm.us/conservation/habitat_handbook/index.htm
5. For custom, site-specific database searches on plants and wildlife. Go to Data then to Free On-Line Data and follow the directions go to: http://nmnhp.unm.edu
6. New Mexico State Forestry Division (505-827-5830) or http://nmrareplants.unm.edu/index.html for state-listed plants
7. For the most current listing of federally listed species always check the U.S. Fish and Wildlife Service at (505-346-2525) or http://ifw2es.fws.gov/EndangeredSpecies/lists/ .

Thank you for the opportunity to review and comment on your project. If you have any questions, please contact Mark Watson at (505) 476-8101 or mwatson@state.nm.us.

Sincerely,

Janell Ward

Janell Ward, Assistant Chief
Conservation Services Division

JW/ttd
xc: Susan MacMullin, New Mexico Ecological Services, USFWS
Luis Rios, SW Area Operations Chief, NMGF
Pat Mathis, SW Area Habitat Specialist, NMGF

New Mexico Species of Concern - Dona Ana County

Common Name	SCIENTIFIC NAME	FWS.. ESA	NM... WCA	FS. BJ	BLM.. NM	NM... Sen	FWS. SOC
Western Red Bat	Lasiurus blossevillii	-	-	S	-	S	S
Eastern Red Bat	Lasiurus borealis	-	-	S	-	S	-
Spotted Bat	Euderma maculatum	-	T	S	S	-	S
Pale Townsend's Big-eared Bat	Plecotus townsendii pallescens	-	-	S	S	S	-
Big Free-tailed Bat	Nyctinomops macrotis	-	-	-	S	S	-
Organ Mountains Colorado Chipmunk	Tamias quadrivittatus australis	-	T	-	S	-	S
Desert Pocket Gopher	Geomys arenarius arenarius	-	-	-	S	-	S
Desert Pocket Gopher	Geomys arenarius brevirostris	-	-	-	-	S S	-
Rock Pocket Mouse	Chaetodipus intermedius rupestris	-	-	-	-	S	-
Pecos River Muskrat	Ondatra zibethicus ripensis	-	-	-	S	S	S
Red Fox	Vulpes vulpes	-	-	-	-	S	-
Ringtail	Bassariscus astutus	-	-	-	-	S	-
Western Spotted Skunk	Spilogale gracilis	-	-	-	-	S	-
Common Hog-nosed Skunk	Conepatus leuconotus	-	-	-	-	S	-
Chihuahuan Pronghorn	Antilocapra americana mexicana	-	-	S	-	M	-
Desert Bighorn Sheep	Ovis canadensis mexicana (endangered pops)	-	E	E	-	M	-
Dona Ana Talussnail	Sonorella todseni	-	T	-	S	S	S
Anthony Blister Beetle	Lytta mixtica	-	-	-	S	S	S
Obsolete Viceroy Butterfly	Basilarchia archippus obsoleta	-	-	S	-	-	S

NATIVE SPECIES APPARENTLY NO LONGER OCCURRING IN DONA ANA COUNTY

American Eel	Anguilla rostrata	(extirpated from NM)
Mexican Tetra	Astyanax mexicanus	
Rio Grande Chub	Gila pandora	
Rio Grande Silvery Minnow	Hybognathus amarus	
Rio Grande Shiner	Notropis jemezanus	
Rio Grande Bluntnose Shiner	Notropis simus simus	(extinct)
Gray Redhorse	Moxostoma congestum	
Flathead Catfish	Pylodictis olivaris	
Blue Sucker	Cycleptus elongatus	
Arizona Black-tailed Prairie Dog	Cynomys ludovicianus arizonensis	
Mexican Gray Wolf	Canis lupus baileyi	
Swift Fox	Vulpes velox velox	
Grizzly Bear	Ursus arctos	(extirpated from NM)
Jaguar	Panthera onca arizonensis	
American Bison	Bos bison	
NM Ramshorn Snail	Paracarbis kansasensis	
Ovate Vertigo Snail	Vertigo ovata	

New Mexico Species of Concern - Dona Ana County

Common Name	SCIENTIFIC NAME	FWS ESA	NM WCA	FS R3	BLM NM	NM Sen	FWS SOC
Northern Leopard Frog	Rana pipiens	-	-	S	-	-	-
Bleached Earless Lizard	Holbrookia maculata ruthveni	-	-	-	-	S N	-
Texas Horned Lizard	Phrynosoma cornutum	-	-	S	S	-	-
White Sands Prairie Lizard	Sceloporus undulatus cowlesi	-	-	-	-	S N	-
Little White Whiptail	Cnemidophorus gypsi	-	-	-	-	S N	-
Desert Kingsnake	Lampropeltis getula splendida	-	-	S	-	-	-
Brown Pelican (no data)	Pelecanus occidentalis carolinensis	E	E	S	-	-	-
Neotropic Cormorant	Phalacrocorax brasilianus	-	T	S	-	-	-
American Bittern	Botaurus lentiginosus	-	-	S	-	-	-
Great Egret	Ardea alba egretta	-	-	S	-	-	-
Snowy Egret	Egretta thula brewsteri	-	-	S	-	-	-
Green Heron	Butorides virescens	-	-	S	-	-	-
Black-crowned Night-Heron	Nycticorax nycticorax hoactli	-	-	S	-	-	-
White-faced Ibis	Plegadis chihi	-	-	S	S	-	-
Osprey	Pandion haliaetus carolinensis	-	-	S	-	-	-
White-tailed Kite (no data)	Elanus caeruleus majusculus	-	-	S	-	-	-
Mississippi Kite	Ictinia mississippiensis	-	-	S	-	-	-
Bald Eagle	Haliaeetus leucocephalus	AD,T mg	T	S	-	-	-
Northern Goshawk	Accipiter gentilis	-	-	S	S	S	S
Common Black-Hawk	Buteogallus anthracinus anthracinus	-	T	S	-	-	-
Swainson's Hawk	Buteo swainsoni	-	-	S	-	-	-
Ferruginous Hawk	Buteo regalis	-	-	S	S	-	-
Aplomado Falcon	Falco femoralis septentrionalis	E mg	E	S	-	-	-
American Peregrine Falcon	Falco peregrinus anatum	DM m	T	S	-	-	M
Sora	Porzana carolina	-	-	S	-	-	-
Whooping Crane	Grus americana	EXPN,E mg	E	S	-	-	-
Western Snowy Plover	Charadrius alexandrinus nivosus	-	-	S	-	-	-
Mountain Plover	Charadrius montanus	PT	-	S	-	S	-
Black-necked Stilt	Himantopus mexicanus	-	-	S	-	-	-
Long-billed Curlew	Numenius americanus americanus	-	-	S	-	-	-
Interior Least Tern	Sterna antillarum athalassos	E mg	E	S	-	-	-
Black Tern	Chlidonias niger surinamensis	-	-	-	S	-	S
Common Ground-dove	Columbina passerina pallescens	-	E	S	-	-	-
Burrowing Owl	Athene cunicularia hypugaea	-	-	-	S	-	S
Mexican Spotted Owl	Strix occidentalis lucida	T hmg	-	S	-	S	-
Yellow-billed Cuckoo	Coccyzus americanus occidentalis	C	-	S	-	S	-
Broad-billed Hummingbird	Cynanthus latirostris magicus	-	T	S	-	-	-
Costa's Hummingbird	Calypte costae	-	T	S	-	-	-
Belted Kingfisher	Ceryle alcyon	-	-	S	-	-	-
Southwestern Willow Flycatcher	Empidonax traillii extimus	E h	E	S	-	-	-
Loggerhead Shrike	Lanius ludovicianus	-	-	-	S	S	-
Bell's Vireo	Vireo bellii	-	T	S	-	-	S
Gray Vireo	Vireo vicinior	-	T	S	-	-	-
Gray Catbird	Dumetella carolinensis rufiorissa	-	-	S	-	-	-
American Redstart	Setophaga ruticilla tricolora	-	-	S	-	-	-
Baird's Sparrow	Ammodramus bairdii	-	T	S	S	-	S
Varied Bunting	Passerina versicolor	-	T	S	-	-	-
Western Small-footed Myotis Bat	Myotis ciliolabrum melanorhinus	-	-	-	S	S	-
Yuma Myotis Bat	Myotis yumanensis yumanensis	-	-	-	S	S	-
Occult Little Brown Myotis Bat	Myotis lucifugus occultus	-	-	S	S	S	-
Long-legged Myotis Bat	Myotis volans interior	-	-	-	S	S	-
Fringed Myotis Bat	Myotis thysanodes thysanodes	-	-	-	S	S	-

DEPARTMENT OF THE ARMY
U.S. ARMY GARRISON WHITE SANDS
100 Headquarters Avenue
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000

January 31, 2005

REPLY TO ATTENTION OF
Environment and Safety Directorate

073437

RECEIVED
FEB - 3
HISTORIC PRESERVATION DIVISION

Ms. Katherine Slick
State Historic Preservation Officer
State Historic Preservation Division
228 East Palace Ave.
Santa Fe, New Mexico 87501

Dear Ms. Slick:

Enclosed is an Environmental Assessment for the National RCS Test Facility. Included with this EA are documents connected with the associated archaeological survey for expansion of the facility. The documents included consist of a final report *Cultural Resources Inventory Survey For The National RCS Test Facility/Rams Comprehensive Development Project, White Sands Missile Range, New Mexico,* as well as the associated NMCRIS form. We consider this undertaking to be of no effect, in accordance with the National Historic Preservation Act, 36 CFR 800, and AR 200-4.

If you should have any questions, please contact Mr. Peter Bullock, Environment and Safety Directorate, Customer Support Division, at (505) 678-2225/0792.

Sincerely,

Thomas A. Ladd
Thomas A. Ladd,
Director, Environment and Safety Directorate

Enclosure

Concur/Non-concur

For NM SHPO Signature 2/5/05 Date

Ysleta del Sur Pueblo
Tribal Council
119 S. Old Pueblo Rd. • P.O.Box 17579 • El Paso, Texas 79917 • (915) 859-8053 • Fax: (915) 859-4352

January 25, 2005

Department of the Army
U. S. Army Garrison White Sands
100 Headquarters Avenue
Attn: IMSW-WSM-ES-C (Bldg 163)
White Sands Missile Range, NM 88002-5000

To Whom It May Concern:

This is in response to your correspondence of January 31, 2005 in regards to the EA and FONSI for the Radar Cross Section Accurate Measurement Site at White Sands Missile Range, New Mexico project. While we believe that this project will not adversely affect traditional, religious or culturally significant sites to our Pueblo and have no opposition to it, we would like to request consultation should any object found during these projects be determined to fall under NAGPRA guidelines.

Thank you for allowing us the opportunity to comment on this matter.

Sincerely,

Arturo Senclair
Tribal Governor

AS:svg

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

February 28, 2005

Cons. # 2-22-05-I-205

Thomas A. Ladd, Director
Environment and Safety Directorate
U.S. Army Garrison White Sands
ATTN: SFIM-SW-WS-ES-C (Bldg 163)
100 Headquarters Avenue
White Sands Missile Range, New Mexico 88002-5000

Dear Mr. Ladd:

Thank you for your January 31, 2005, letter requesting our review of the draft Environmental Assessment (EA) for the Radar Cross Section Accurate Measurement Site (RAMS) Comprehensive Project at White Sands Missile Range (WSMR), New Mexico. The proposed project would include constructing a 34,000-square foot (ft^2) indoor target flip facility, a 22,500 ft^2 Advanced Target Suspension System, a new paint facility, three administrative complexes, six target storage facilities, maintenance and supply facilities, an equipment building, and utility upgrades. The proposed project would impact approximately 600 acres of creosotebush scrubland habitat on and adjacent to the existing RAMS site on WSMR, Sierra County, New Mexico. The U.S. Fish and Wildlife Service (Service) has reviewed the EA for impacts to fish and wildlife resources and offer the following comments.

GENERAL COMMENTS

Based on our review of the EA, the proposed project would result in minimal long-term impacts to fish and wildlife resources. Although 600 acres of creosotebush scrubland habitat would be impacted by the project (450 permanently), thousands of acres immediately adjacent to the project area are predominantly the same habitat type. Therefore, most of the wildlife occurring in the project area would likely migrate to adjacent areas. To ensure that short-term construction related impacts are minimized, the Service recommends that the U.S. Department of the Army implement the minimization and mitigation measures identified on pages 29 through 31 of the EA.

Rec'd
3/7/2005
ES
ORC ES-C

SPECIFIC COMMENTS

2.1 Proposed Action, Page 6, Item 8
We recommend, where possible that trenching and burying of cable and pipeline be done concurrently. In addition, we recommend leaving the least amount of trench open overnight and providing escape ramps for trapped wildlife.

3.4.3.1 Federal Listings, Table 3.4.3.1-1 Federally Listed Species of Sierra County, New Mexico
Currently there are no federally proposed species in Sierra County. We recommend that you modify the Federal Status column of the subject table accordingly. Todsen's pennyroyal, Gila trout, Rio Grande silvery minnow, northern aplomado falcon, and southwestern willow flycatcher are federally listed as endangered. Bald eagle, Mexican spotted owl, and Chiricahua leopard frog are federally listed as threatened.

Thank you for your concern for New Mexico's wildlife and their habitats. In future correspondence regarding this project, please refer to consultation # 2-22-05-I-205. If you have any questions about the information in this letter, please contact John Branstetter at the letterhead address or at (505) 346-2525, ext. 4753.

Sincerely,

Susan MacMullin

Susan MacMullin
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry and Resources Conservation Division, Santa Fe, New Mexico

APPENDIX C
NOTICE OF AVAILABILITY PUBLICATIONS

HOLLOMANN AIR FORCE BASE

550 TABOSA AVE.

HOLLOMAN AIR FORCE BASE, NM 88330

AD # 453138

LINES 96

COST: $502.86

PUBLISHERS AFFIDAVIT

STATE OF TEXAS
COUNTY OF EL PASO

Before me, a Notary in and for El Paso County, State of Texas, on this day personally, appeared TERRIE CARTER who states upon oath that she is the ASSISTANT CLASSIFIED MANAGER of the EL PASO TIMES, a daily newspaper published in the City and County El Paso, State of Texas, which is a newspaper of general circulation and which has been continously and regularly published for the period of not less than one year in the said County of El Paso, and that she was upon the dates herein mentioned in the EL PASO TIMES.

That the LEGAL NOTICE copy was published in the EL PASO TIMES for the date(s) of such follows 2 DAY(s) to wit JANUARY 26 and 30, 2005.

Signed Terrie A. Carter

Subscribed and sworn to before me,
This 30TH day of JANUARY, 2005.

Notary Public

Notice of Availability
Interested parties are hereby notified that the United States Air Force, Holloman Air Force Base, NM has prepared a Draft Environmental Assessment (EA) and a Draft Finding of No Significant Impact (FNSI) in association with White Sands Missile Range (WSMR) for the proposed execution of the Radar Advanced Measurement Site (RAMS) Comprehensive Expansion and that these documents are available for review.
The Draft RAMS Comprehensive EA documents the proposed actions for the RAMS comprehensive expansion, alternatives to the proposed actions, the affected environment, and impacts to the affected environment. In addition the results of a threatened and endangered species survey and a cultural resources survey are discussed within this Draft EA.
Information regarding the project may be found in the Draft EA and FONSI available for review at the Main Public Library, El Paso, Texas; the Thomas Branigan Memorial Library, Las Cruces, New Mexico; Socorro Public Library, Socorro, New Mexico, and the Alamogordo Public Library, Alamogordo, New Mexico. Copies may also be obtained by writing to the address below.
Comments regarding the Draft EA and the plan will be accepted through February 28, 2005, and may be directed to:
Department of the Army
U.S. Army Garrison White Sands
100 Headquarters Avenue
Attn: SFIM-SW-WS-ES-C (Bldg. 163)
White Sands Missile Range, NM 88002-5000
If you have any questions, please contact Ms. Lisa Santana (505) 678-2225/2641, Customer Support Division, Environment and Safety Directorate.
This notice is being issued to interested parties, in accordance with the National Environmental Policy Act (Public Law [illegible]) 42 United States Code 4321 et seq.), as amended in 1975 by PL 94-52 and PL 94-83.

PROOF OF PUBLICATION

Wayne Barnard, being duly sworn, deposes and says that he is the Classified Manager of the Las Cruces Sun-News, a newspaper published daily in the county of Dona Ana, State of New Mexico; that the notice 33734 per clipping attached was published once a week/day in regular and entire issue of said newspaper and not in any supplement thereof for 2 consecutive week(s)/day(s), the first publication was in the issue dated January 26, 2005 and the last publication was January 30, 2005

Deponent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Signed

Classified Manager
Official Position

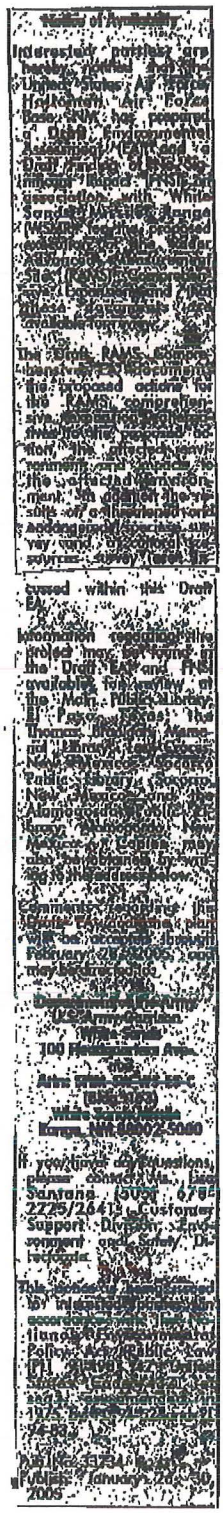
STATE OF NEW MEXICO
ss.
County of Dona Ana

Subscribed and sworn before me this

31 day of January
2005

Notary Public in and for
Dona Ana County, New Mexico

9-14-05
My Term Expires



AFFIDAVIT OF PUBLICATION

ALAMOGORDO,
STATE OF NEW MEXICO
COUNTY OF OTERO. **SS.**

I, RICHARD COLTHARP, being duly sworn, on my oath say that I am the Publisher of the Alamogordo Daily News, a Newspaper of daily circulation, published and printed in the English language at the City of Alamogordo, Otero County, State of New Mexico. That the Alamogordo Daily News has been regularly published and issued for more than nine months prior to the date of the first publication hereinafter mentioned.

That the attached notice was published 2 time(s) in 2 issue(s) of s aid ne wspaper, a nd no t in a ny s upplement thereof, the first publication being on January 26, 2005 and subsequent publications being on January 30, 2005.

That said notice was published in accordance with the laws of the State of New Mexico.

Publisher

Subscribed in my presence and sworn before me this the 9th day of February 2005

Bernice Cavazos
Notary Public

My commission expires 3-18-08

Legal Number: 0035

Legal Notice

Notice of Availability

Interested parties are hereby notified that the United States Air Force, Holloman Air Force Base, NM, has prepared a Draft Environmental Assessment (EA) and a Draft Finding of No Significant Impact (FNSI) in association with White Sands Missile Range (WSMR) for the proposed execution of the Major Advanced Measurement Site (RAMS) Comprehensive Expansion and that these documents are available for review.

The Draft EA Comprehensive EA documents the purpose and actions for the RAMS comprehensive expansion, alternatives to the proposed action, the affected environment, and impacts to the affected environment. In addition the results of a threatened and endangered species survey and a cultural resources survey are discussed within this Draft EA.

Information regarding the project may be found in the Draft EA and FNSI available for review at the Main Public Library, El Paso, Texas; the Thomas Branigan Memorial Library, Las Cruces, New Mexico; Socorro Public Library, Socorro, New Mexico, and the Alamogordo Public Library, Alamogordo, New Mexico. Copies may also be obtained by writing to the address below.

Comments regarding the Draft EA and the plan will be accepted through February 28, 2005, and may be directed to:

Department of the Army
U.S. Army Garrison
White Sands
100 Headquarters Avenue
Attn: SFIM-SW-WS-ES-C (Bldg. 163)
White Sands Missile Range, NM 88002-5000

If you have any questions, please contact Ms. Lisa Sanborn (505) 678-2225/2641, Customer Support Division, Environment and Safety Directorate.

This notice is being issued to interested parties, in accordance with the National Environmental Policy Act (Public Law [PL] 91-190, 42 United States Code 4321 et seq.), as amended in 1975 by PL 94-52 and PL 94-83.

STATE OF NEW MEXICO)
) SS.
COUNTY OF SOCORRO)

Dana Bowley, being first duly sworn, deposes and says that he is Editor/Manager of "El Defensor Chieftain"; that said "El Defensor Chieftain" is a semi-weekly newspaper of general paid circulation in the County of Socorro, State of New Mexico, which is entered under the second class postal privilege and is published in Socorro, Socorro County, New Mexico; that said "El Defensor Chieftain" is a newspaper duly qualified in all respects for the purpose of publishing legal notices and advertisements in Socorro County, New Mexico; that the publication, a copy of which is hereto attached was published in the regular and entire issue of every number of said newspaper during the period of publications, and that said notice was and published in the newspaper proper and to a supplement thereof of 2 time(s); the first publication began on the January 26, 2005 and the last publication on the January 29, 2005.

Affiant

Subscribed and sworn to before me this 10TH day of March 2005.

Notary Public

OFFICIAL SEAL
Norma A. Cervantes
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 11/30/2007

SOCORRO COUNTY

LEGAL NOTICE
Notice of Availability

Interested parties are hereby notified that the United States Air Force, Holloman Air Force Base, NM has prepared a Draft Environmental Assessment (EA) and a Draft Finding of No Significant Impact (FNSI) in association with White Sands Missile Range (WSMR) for the proposed execution of the Radar Advanced Measurement Site (RAMS) Comprehensive Expansion and that these documents are available for review.

The Draft RAMS Comprehensive EA documents the proposed actions for the RAMS comprehensive expansion, alternatives to the proposed action, the affected environment, and impacts to the affected environment. In addition the results of a threatened and endangered species survey and a cultural resources survey are discussed within this Draft EA.

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White Sands Missile Range,
NM 88002-5000

If you have any questions, please contact Ms. Lisa Santana (505) 678-2225/2641, Customer Support Division, Environment and Safety Directorate.

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